THE GENESEE FARMER.

Vol. XVIII, Second Series. ROCHESTER, N. Y., APRIL, 1857. No. 4

CULTIVATION OF BARLEY.

The cultivation of barley is receiving more and more attention every year in this section. The uncertainty of the wheat crop since the prevalence of the midge, and the increasing consumption of *Lager bier*, render barley one of the most profitable crops that can be raised on many farms. The geographical range of barley is greater than that of either wheat or oats; it is cultivated under the scorching suns of Africa and Central Asia, and in the northern regions of Europe and America. Its susceptibility of rapid and vigorous growth, without injury to the perfect development and maturity of the seed, fits it admirably for ripening under the intense and steady heat of the South, or the short-lived summers of the North.

Fig. 1.

It is probable that all the kinds of barley in general cultivation are varieties of one species, of which the *Hordeum distichum* of Linnæus is the type. The spikelets of this genus always standing in threes, and the threes being placed back to back, it is evident that every ear of barley must consist of six rows of spikelets. If the middle spikelet of each set of threes is alone perfect, the side spikelets being abortive, we have the common two rowed barley *(H. distichum)* and its many varieties; if the two lateral of each set of three is perfect, and the central spikelets imperfect, as sometimes happens, then we have four rowed barley; if, on the other hand, all the spikelets are perfect, we have six rowed barley *(H. hexastichum)*; but the cases of four rowed barley being merley accidental, they may be referred to the six rowed form, and thus we have only two principal kinds of barley, the two rowed and six rowed. The former is the only kind of barley that has been found apparently wild.

Fig. 2.

The annexed engravings (figs. 1, 2, 3 and 4,) represent some of the best varieties of the two rowed barley. The drawings were taken from specimens grown under circumstances equally suitable to them respectively, and they may thus be compared with some confidence. The common two rowed barley (fig 1) is perhaps cultivated to a greater extent in this country and in England than any other variety. It is remarkable for its early maturity and adaptation to a great variety of soils. Haxton, an English writer of great experience, says: "For light soils of an inferior nature, this barley is undoubtedly better adapted than almost any other kind; and even on cold clay land, its early maturity and free manner of growing give it a decided superiority over those varieties which, although of finer quality, are later of coming to maturity."

Fig. 3.

The Chevalier barley (fig. 2) has thicker and stiffer straw than the common two rowed barley, ripens later, and on a rich soil will yield a heavier crop. In England it has a high reputation with the malsters, who will pay five or six cents a bushel more for it than for the former. The soils best adapted for this variety are a black and rich sandy loam, though a rather heavy clay soil that breaks down readily into a fine, loose mould frequently, when the season is favorable for getting the land into good condition and sowing early, produces large crops.

Fig. 4.

Italian barley (fig. 3) is a remarkable variety, both in appearance and general habit of growth. The ears are short and broad, and the grains are extraordinarily plump and round, having a clear yellow, transparent husk. The straw is of a bright yellow hue, (hence this variety is frequently called Golden barley,) and is stiffer, taller and more erect than any of the other varieties, and on this account is particularly adapted for sowing on rich black or soft soils, which are apt to produce too much bulk. It was introduced into Scotland from the Alps some years ago, and was extensively cultivated, but it is found to degenerate so rapidly when grown for two or three years on the same farm, that its cultivation is now nearly abandoned there. It might suit our climate better. The result of several experiments in England show that it is very productive, yielding, in one experiment, 52 bushels per acre, while the Chevalier yielded only 43 bushels per acre. Weight per bushel the same (49½ lbs.) in both cases.

Fig. 5.

The Common Four or Six Rowed barley (fig. 4) differs very materially from any of the foregoing two rowed varieties. The ears are shorter and thicker, and the grains are arranged around the rachis in two single and two double rows. The single rows are opposite each other, and when the double rows are removed the appearance of the ear is exactly similar to that of two rowed barley when deprived of the chaffy-like matter (barren florets) between the rows. The grains of the single rows are straight, and in the plane of the rachis, while those of the double rows diverge angularly from each other. Each double row is generally distinct at the base, but the grains gradually assume a more upright position towards the top, where they merge into one. For this reason four rowed barley cannot be considered, as before stated, a distinct species. In Ireland this variety is usually sown as a winter crop. A Scotch writer, speaking of this variety, says: "When bere is cultivated on good land, situated in an early climate, the produce is often greater than that yielded by the two rowed barley; yet notwithstanding this, the price which it fetches is so much lower that the gross return per acre is less, while at the same time the labor of threshing and cleaning the grain is greater." In this vicinity, four or six rowed barley is considered by many farmers more profitable than the two rowed, the yield being greater, and the malsters paying nearly as much for one as the other.

Fig. 6.

An improved variety of the common four or six rowed barley is cultivated in Great Britain under the name of Victoria Bere, (fig. 5,) of which Lawson says: "Its introduction may be considered as the first step to the acquirement of superior varieties of the old big, or bere, (fig. 4,) compared with which it produces longer straw, is longer eared, more prolific, and produces a finer sample, sometimes weighing 56 lbs. per bushel."

The true Six Rowed barley *(H. hexastichum)*—fig. 6—is interesting in a botanical point of view, but of little value to the practical farmer. It differs from the two former varieties (figs. 4 and 5) in having all the rows equi-distant from each other. The ear is short, and contains on an average only about thirty-two coarse grains. It is hardy and prolific, and can be sown either in the fall or early in the spring.

Four or Six Rowed Naked barley (fig. 7) differs from the common four or six rowed barley (fig. 4) in its seeds, which separate from the chaff in threshing, but the form of the ear is similar, although longer. It is cultivated in the North of Europe, where its earliness and rapid growth suit the short summers, but in England its cultivation has met with but little encouragement. It is sometimes called Siberian barley. One of our correspondents, a short time ago, sent us a sample of grain, wishing us to inform him what it was, but neglected to give us his post-office address. We think it is Siberian barley; and if this meets his eye, we should be glad to hear from him in regard to it. We think it will prove valuable in this country. It was introduced into England in 1768. Lawson states that two bushels of it were grown in 1769, weighing 132 lbs., or 66 lbs. per bushel! These were sent to mill, "and yielded 80 lbs. of fine flour, equal to London seconds, 40 lbs. of coarse sort, and 12 lbs. of bran, superior to that of wheat. The best flour made excellent bread, and so retentive of moisture as to be as good at twelve or fourteen days after baking as wheaten bread on the fourth day." (Wheat bread in the moist climate of England keeps moist and good much longer than in this country.) Twelve lbs. of barley and the same of wheat flour, being made into bread and baked in the same oven, the wheaten loaf weighed 15 lbs. and the barley loaf 18 lbs. It is said to make good malt.

Fig. 7.

Another variety of barley, similar to the Siberian, was introduced into England from the Himmalayan Mountains in 1817, called Nepaul barley, or Nepaul wheat *(H. trifurcatum)*. It is not cultivated to any extent in Great Britain. The same variety has been introduced into this country and extensively distributed during the last two or three years, by Mr. I. W. Briggs, of West Macedon, N. Y., under the name of "Beardless" barley. Whether it will prove of any more value in this country than it has in England, remains to be seen.

The soils best adapted for barley are those which are naturally dry and easily reduced to a fine tilth. It should never be sown on sod land. It is vain to hope for a good crop unless the soil is thoroughly pulverized. Some of the best crops of barley we have

seen in this neighborhood, were grown on land plowed in the fall, and cultivated and harrowed thoroughly in the spring, without plowing. It is desirable to sow as early as possible, but it is better to wait till the soil is in good condition than to plow or cultivate it early when in a wet state. It does best, perhaps, after corn than after any other grain crop. If the corn has been well manured and the ground kept clear by the repeated use of the horse-hoe, no better preparation could be desired.

Two bushels per acre is the usual quantity of seed. We should prefer a little more, unless it is sown with the drill, when two bushels is amply sufficient. In England, from three to four bushels is the usual quantity. After sowing, the land should be well harrowed lengthwise, and afterwards across, or obliquely, then roll, sow the clover seed, (if desired,) and finish off with a light pair of harrows lengthwise of the furrows. The practice of rolling the land when the barley is just out of the ground is very common in England, but in this country it is apt to cause the soil to bake on the surface, if it is somewhat wet. For this reason it is better to roll before the last harrowing, if the ground is dry enough to admit the use of the roller without clogging.

When barley commands one dollar per bushel, we think Peruvian guano might be used as a manure for this crop with considerable profit, though the results of experiments which have been made with it are somewhat conflicting. It should be sown broadcast, say at the rate of one hundred and fifty pounds per acre, and harrowed in, before or at the time the seed is sown.

CULTIVATION OF OATS.

For the production of oats of the best quality, a moist atmosphere and a low and equal range of summer temperature is required. An insular position, too, is desirable. The best oats we have ever seen in this country were grown on a piece of new land, entirely surrounded by extensive woods. Oats will flourish on nearly all kinds of soil. Land that is *too poor* to produce wheat or barley, will often yield a fair crop of oats, and soil which is *too rich* for these crops will not unfrequently produce an enormous crop of oats. For the production of a large crop, irrespective of quality, a soil of a black mucky nature, abounding in organic matter, is well adapted for oats. If too rich, however, the crop may fall down before the grain ripens. To avoid this, reduce the fertility of the soil by taking a crop or two of Indian corn off first. A good dressing of lime, too, will often strengthen the straw of the oats on such soil and enable it to produce an immense crop. Three or four bushels of salt per acre might also be useful, but we have had no experience with it. Clayey soils, when well prepared, frequently yield good crops of oats, and of a superior quality. Loose, black, mucky soils, which are too low and wet for barley, may be sown with oats, and the same may be said of cold, heavy clay land. Oats are frequently sown on sod ground with good results, though as a general rule, if the land is in good condition, they do better after a root or grain crop.

Two bushels per acre is the usual quantity of seed sown. We think two and a half and even three bushels might frequently be sown with advantage. Oats should be sown as early as the soil and season will admit, barley, however, taking the precedence.

The *Common White* oat, and *Black* oat, are the two varieties most extensively cultivated. They are hardy and productive, and weigh from 30 to 34 lbs per bushel. The latter is perhaps most popular in this section. The *White Poland* oat is a very superior variety in some respects, weighing over 40 lbs per bushel; but the yield per acre is small, and it shells out easily. For these reasons many farmers have abandoned its cultivation, finding the Common Black or White oat more profitable.

CULTIVATION OF SPRING WHEAT.

So far as chemical composition is concerned, the soils most favorable for raising winter wheat, are also best adapted for the cultivation of spring wheat. But the mechanical condition of the soil most favorable for the production of these crops varies very materially. Winter wheat requires a seed bed of a somewhat hard and compact texture. It is easy to pulverize the soil too much. In fact, a somewhat cloddy seed-bed is desirable. For spring wheat on the other hand, the soil cannot be made too fine and loose. Repeated harrowings are required. The soil must be dry, warm and active, so as to enable the plant to grow rapidly during its early stages. It is desirable to sow early, but it is better to wait till the ground can be got into fine tilth, even if the wheat cannot be sown till the middle of May, than to plow and harrow the land before it is dry enough to crumble to pieces readily.

Varieties should be selected with reference to the character of the soil, and time of seeding. This point is too much neglected. For loose, low, somewhat mucky soils the Fife is perhaps one of the best varieties of spring wheat at present known. It can be sown quite late. Good crops have been raised in this vicinity, on land that was not dry enough to sow till the first of June. The Canada Club, on the other hand, should be sown early on dry uplands, of a firmer texture. The Siberian, Black Sea, and Tea or China are also excellent and well known varieties of more or less repute in different sections. The Magnum Bonum or Zimmerman wheat which took a prize at the Annual Meeting of the N. Y. State Agricultural Society in 1855, and which was sold for fifty cents a quart, proves, as we stated at the time, to be nothing more than the African or Mummy wheat, introduced under a new name. A cut and description of it will be found in the *Genesee Farmer* for May, 1852. It has been known in Germany for 240 years. It has been cultivated to some extent in England as a winter wheat, and according to Loudon, is *"in little estimation."* Our climate may be more suitable for it, but it is hardly worth fifty cents a quart.

CARROTS.—An esteemed correspondent at Crowland, C. W., informs us that he raised last year 99 bushels of carrots on a quarter of an acre of ground, and adds, "Beat this who can." We should consider 396 bushels per acre rather a small crop in this vicinity. Eight hundred bushels per acre is not an uncommon yield. Our correspondent's mode of cultivation is as follows: Plow under, eight inches deep, about 40 loads of well rotted barn yard manure per acre in the fall; and in the spring plow under about 24 loads of horse manure more; and about the middle of May plow the land again, and mix the manure thoroughly with the soil. Then sow the seed in drills, ten inches apart. Hoe them three times.

AN INTERESTING LETTER FROM PROFESSOR LEE.

Influence of Agricultural Papers.—The GENESEE FARMER *a cheap Educational Institution.—Premiums for Short Essays.—Chinese Sugar Cane.—Corn Stalks and Cotton Seed for Cows.—Climate and Soil of Georgia.*

ATHENS, GA., Feb. 23, 1857.

FRIEND HARRIS:—Since I have been cultivating the soil in upper Georgia, I have read the *Genesee Farmer* with increased interest to avail myself of the many valuable suggestions which it contains. It is a marvel to me how sensible men engaged in tillage of any kind, or in stock-husbandry, so often deny themselves the advantages placed within their reach by the numerous agricultural papers of the day. Such neglect is in many respects a public misfortune; for it not only diminishes the aggregate wealth of the country, compared with what it would be if all farmers both read and labored to improve, but it tends to keep them in ignorance to their great discredit, and to the lasting injury of society. How to accomplish a perfect reform in this matter has long been the subject of thought and study with the writer; and I am pleased with your plan of offering small premiums for short original communications on a variety of farming processes most familiar to your readers, and easy to discuss. This can hardly fail to impart additional interest to your paper, and increase its circulation; and I trust every friend of progress in agricultural knowledge, and of improvement in mankind, who now takes the *Genesee Farmer*, will cooperate with you in enlarging its already wide sphere of usefulness. If the "mite" of the poor widow was acceptable and valuable on many accounts, as evincing an excellent heart, and a true christian disposition, let no one withhold his contribution to the rural literature of the distinguished age in which he lives. To young persons of both sexes, few accomplishments are more desirable than the ability to write properly for the press; and this equally agreeable and useful attainment is acquired only by practice and due care in reference alike to *what* is written, and *how* it is written. In America, more persons can speak and write with nearly grammatical accuracy than in any other part of the world; and as a consequence, we have more popular orators, and a larger number of newspapers than all the rest of the human family. To cultivate this honorable feature of our republican institutions, and still farther elevate the masses, who till the earth, what school is better than that cheapest of all schools for adults, the *Genesee Farmer?*

As an old and humble pupil, who has learned much from its enlightened correspondence during the last twenty-five years, I cherish for it a profound regard as an educational institution. Viewed in this light, it has all the claims that age, character, and good conduct ever impart to public sympathy and support. Through the medium of its monthly visits, thousands and tens of thousands may teach one another the sound practical wisdom that grows up from the cultivated common sense of persons earnestly devoted to a noble and common calling. This is leveling a whole community *upward*, without pulling down one member of society. It fosters a close observation of all agricultural interests and practices, and a livelier appreciation of both their merits and their defects, to extend the one, and correct the other. Suppose all the Mind, now less than half developed, that is employed in tillage, husbandry, horticulture, and fruit-culture, in the United States, were as fully enlightened as is clearly practicable? Who does not see the benefits that must, in that case, accrue to this young, growing, and aspiring republic? As one of its citizens, I would not neglect the duty of reading and studying to learn, nor that of extending a word of encouragement to my brother farmers that they may do likewise. All must learn before they can teach; and nearly all have learnt many lessons from experience, if not otherwise, which enable them to instruct others in some things that are worth knowing.

Not to prolong these introductory remarks, I would state that the cultivation of the Chinese Sugar Cane is just now the most favored theme of discussion among progressive planters. In the south part of this State, two crops from one planting are grown in a year. I saw ripe seed at Savannah last autumn from the second growth of the plants, just as a second crop of clover is often produced, with mature seed, at the North. The syrup of the Chinese cane has kept well up to this time, and resembles that made from the sap of the maple tree in taste more than the syrup obtained from the common sugar cane of Louisiana. It is to be regretted that the saccharine matter in this recently introduced cane is not, when expressed, in a condition to crystalize, or only partly in that state. It is in the chemical condition of maple sugar after the buds of the tree are somewhat developed, when the syrup refuses to "grain," or granulate. In a word, the sugar is partly that of grapes in character, and partly that of the proper sugar cane, and crystalizable. As a forage plant, and especially for soiling cows, it promises to supersede corn.

I spent a part of the months of November and December in Washington, and saw the crops grown to supply the Patent Office with seed, and was satisfied from personal observation that Mr. BROWNE, (the successor of the writer in taking charge of the Agricultural Department of that Bureau,) has rendered the country an important service, by introducing the seed of this new sugar plant from France, where it first attracted his attention. Mr. WHITNEY, the first projector of the Pacific Railway, raised most of the seed for government distribution. He keeps a fine herd of cows, and sells milk in the federal metropolis; and such was the obvious value of the Chinese cane for dairy purposes and fattening dry cows, as to leave no doubt in my mind that the plant is a great acquisition to the country. Members of congress will distribute something over one hundred bushels of the seed; and it is to be hoped that it will fall into good hands. Such as have it, should plant it on good land, and not too closely so as to injure the full maturity of the seed. The writer will plant, and cause to be planted, over sixty acres this season. Mr. PETERS, who made several barrels of the syrup last year, will plant. I am told, one hundred acres. Southern planters will give the crop a fair trial soon. In this quarter of the Union, where hay is so expensive, a good substitute for English grasses is a great desideratum.—I made a good sized barn full of corn hay last season, which answers all my expectations this winter. That and cotton seed keep cows in fine condition. Their butter, however, is very white; but the seed gives it no unpleasant taste. Not raising any cotton, I pay ten cents a bushel for seed, which yields excellent manure.

This region is favored with an admirable climate, having pure air and water, and a medium tempera-

ture between heat and cold. The soil is none of the richest, being formed mainly of primitive and transition rocks, *in situ;* and not, as in all higher latitudes, mainly from *drift* depositions. The geology of Georgia is quite interesting, viewed in its agricultural relations, as is the study of this science everywhere.—Having a fondness to talk and write of rocks and soils, you may hear from me on this subject. D. Lee.

ITEMS SUGGESTED BY THE MARCH NUMBER.

The "Prize Essay" number is before me, and proves I was not destined to be disappointed in my anticipations of a "rare treat from its perusal." Let me *itemize* as usual:

Hints on Spring Work.—Yes, we must now be at it. Spring is here, and its *work* has come with it. About the first that can be done is to build new, and re-lay old, *fences.* Don't forget to put up a gate or two on the most frequented routes. Sow your clover seed, and be sure you have fresh seed, of last summer's crop. If older, its growing is doubtful. For corn and potatoes, manure should now be drawn out, but I would not spread it until the day it was to be plowed in. Get in spring crops as soon as the season will admit. It is important that they get rooted before the early summer drouth.

Frauds in Artificial Manures.—The success of the self-styled Professors, in humbugging farmers, is largely due to their neglect to look and think for themselves. Let them search out and save up the fertilizers wasted upon their own farms, and they would not need to go abroad for artificial manures to enrich their soils. If they do, chemical analysis will inform them truly of its value.

Plaster for Clover.—Knowing that some Seneca county farmers think plaster can be used too freely, I thought perhaps Mr. Johnston coincided with them in opinion, and sowed plaster only once in *seven years* on his farm. It is three years since we have sown any, and we have had only half a crop of clover, and very poor success in seeding, during that time. I am glad to know what Mr. J.'s practice is, and must have two tons of plaster for my grass lands this spring. For corn, I think ashes better than plaster, though many mix the two for a top dressing, and commend it highly.

Foul in the Feet.—Many years since, some of our cattle were severely afflicted with this disease; they could scarcely stand, and it seemed as though their hoofs would rot off. There was plenty of *ergot* in our speargrass hay. Of late years, we have grown only timothy and clover hay, and have seen nothing of the disease. I have no doubt that its cause is truly stated by your New Haven correspondent.

Management of Swine.—I like Mr. Britten's remarks on this subject, because he "winters his pigs in the pork barrel." It is a great nuisance, this feeding a lot of pigs all winter, and then not making better pork of them in December than spring pigs ought to make, though at more than one-half additional expense.

Winter Wheat, Indian Corn, and Potatoes.—The prize articles on the cultivation of these crops, are each of them worth the price of the *Farmer* for several years. Yet there are hundreds of farmers who can write just as well—who can raise as good crops, and *know how to do it every time,* extraordinaries excepted. Will they, too, write out their experience? It will enable you to give, every month, a "Prize Essay number."

Fencing—Sweet Briar Hedges.—One of your correspondents suggests a trial of sweet briar hedges. This plant would seem pretty well adapted to hedging purposes. It has a "quick, thick, and thorny growth," and on good soil I have seen the stems an inch in diameter, and ten feet high. Actual trial, however, must be had to test it.

Best Means of Destroying Weeds.—The *short* essay (twenty-five lines) on this subject, suggests a very thorough remedy for a very serious evil. It will not be very expensive to give it a trial, and I think it will succeed.

Women's Rights as to Milking.—Give us more light on this question, if you have any in reserve; not that I need it in my own case, for my "women folks" do not need *asking* to milk in the busy season. I think it is a *busy season* any time in the year with women who have their own housework to do and children to care for, and so does any kind and thoughtful husband.

Fruit-Growers' Association.—The discussions of this body I look upon as of much value to the public, and hope the Society may receive every encouragement from the agricultural as well as horticultural community. Yours is the best report, so far, I have seen of its proceedings. The Horticultural Department of the *Farmer* is well sustained, and filled with practical matter, though I have, heretofore, seldom offered any remarks upon its contents. My present garden is but just commenced; it is half a dozen years since circumstances have permitted me to pay much practical attention to the subject. B.

Niagara Co., N. Y.

NOTES FOR THE MONTH BY A. W.

The Death of Dr. Kane.—Since my last our country is deprived of a son, in his prime, by death, of whom it may well be proud. His Artic expedition, as lately published, is one of the most stirring narratives of Artic research and discovery yet published. His graphic details of the toil, exposure, and famine of himself and shipmates, are animated by the enthusiasm and indomitable courage of the man.—While journals of other Artic voyagers are tame and meagre from the paucity of material and incident to be found in a bold, icy, hyperborean region, Dr. Kane enlivens his journal by making the most of every thing that came under the notice of his ever active, expanded, philosophical and observant mind. He not only gives the moral and physical individuality of each of his associates, and shipmates, but to every praiseworthy Esquimaux friend, with a detail of their truly philosohpical habits of life. Of the country, ice bound and barren as it is, he makes the most and best by describing its geology, its stinted sylva, meagre herbaceous plants, mosses and flora; its mammalia, birds, cetacea and fishes, with the inspired pen of a true master. But although the mind, through the aid of divine Providence, lifted up and sustained the severely tried body in every privation and exposure, the effort was too unequal; the material has succumbed, and the spirit has gone to God who gave it. I repeat the world has lost in Dr. Kane, a hero, the like of whom the present generation may not see again.

The Prize Essays.—The March number of the *Farmer* is enriched by a series of short, graphic es-

says; the most important of which detail farm experiments of manuring, tilling, culture and crops; but there are others not less interesting, and hardly less important to domestic comfort on the farm. The best of them is the one over the signature of "A Mother," and a true mother she undoubtedly is. I would bet a cookey that her daughters are not of the number of those *scary* creatures, who are "afraid of seeing their own shadows in the milking yard." She evidently does not feel at all scandalized at GREELEY's comments on "Country Cooking." My word for it, her breakfast cakes, well made aromatic Java, and white table cloth, cannot be eclipsed even in Gotham. Methinks a boy who is so fortunate as to have such a mother will always leave his *stable* boots outside the kitchen door. It is important in detailing those farm experiments in manuring and cultivating crops, that the surface and subsoil should be described, and also whether the field is either surface drained or underdrained, or both, which is still better.

THE WINTER.—December and January were the coldest months we have had here since my recollection, although the mercury sunk but one night as low as 24° below zero, and on very few nights before or after the 18th January, was it more than 2° or 3° below; generally many degrees above. We have had none too much snow, sleighing was good from the middle of December to the 6th of February. February was one continued thaw night and day, the wheat looked well as the snow left it, and the grass grew in sheltered slopes, putting on its richest green. March came in like a lion, but a north-east snow storm covered the wheat again like a garment, so that although the mercury fell to 5° above zero on the morning of the 2d, and it was now again on the morning of the 7th as low as 7° above; the ground is but little frozen, and the promise of the wheat crop was never better. Our Isabella grape vines are safe.

GUANO AND CONCENTRATED MANURES.—It is truly comfortable to those who have been pained so often with the idea of the destruction and waste of organic matter in our great cities, which if persisted in must eventually bring sterility to our rural domains, to read the numerous competing advertisements of highly concentrated manures for sale at New York, all, except Guano, made from the night soil, dead animals, and offal of the city. A new company at Brooklyn advertises Tafeu, which may be supposed to be still richer in ammonia salts, than that of her sister city, where that great diluant and solvent Croton water, is in such active force; but all depends on the skill and honor of the manufacturer. Much praise is due to Meinheer SCHWAGER for his unique enterprise in turning the little sea girt barren Island into a laboratory of fixed salts, made from the excrements of defunct animals, and offal of the city. But methinks if he looks to his permanent interest, he will not set the price above that of Peruvian guano; true the latter holds its ammonia as a volatile carbonate,* but some of our best practical farmers prefer stable manure after it has arrived at that same ripe and volatile condition.

THE REDUCTION OF THE TARIFF ON IMPOSTS BY CONGRESS.—While this important concession to free-trade is an honor to the improved intelligence of the country, it cannot but fail to redound to both our agricultural and manufacturing interests. Our carpet manufacturers, so long discouraged by taxation, now get their coarse wool and dye-stuffs free; and the farmers best customers, the manufacturers of the finer fabrics of wool, have their dye-stuffs free; hence they will be better able to compete with the foreign manufacturer, and to shut out of the country much of that *wool in the cloth*, which will be a true protection to our fine wool growers. S. W.

Waterloo, N. Y.

* Our esteemed correspondent will permit us to say that this idea, though held by nearly all agricultural writers, is without foundation. A good, sound sample of Peruvian guano seldom contains as much as one per cent of carbonate of ammonia. If it contains two or three per cent of ammonia in the form of a carbonate, it is safe to assume that the guano has been damaged by water. The ammonia of Peruvian guano exists in the form of urea, urate of ammonia and other fixed salts, and is converted into the carbonate of ammonia by fermentation. Keep guano *dry*, and there will be but little loss of ammonia, however much it is exposed to the air. If it is moistened and placed in a warm temperature, rapid fermentation soon takes place, carbonate of ammonia is formed and great loss is sustained.—EDS.

TEN RULES TO BE OBSERVED IN MAKING BUTTER.

IN making good butter there are several nice operations to be gone through with, which require an eye to cleanliness, forethought, and some little experience.

1. On milking clean, fast, yet gently, regularly twice a day, depends the success of the dairyman. Bad milkers should not be tolerated in a herd; better pay double the price for good ones.

2. Straining is quite simple, but it should be borne in mind that two pans about half full each will produce a greater amount of cream than the same milk if in but one pan; the reason of this is the greater surface.

3. Scalding is quite an important feature in the way of making butter in cool weather; the cream rises much quicker, milk keeps sweet longer, the butter is of a better color, and churns in one-half the time.

4. Skimming should always be done before the milk becomes loppered; otherwise much of the cream turns into whey and is lost.

5. Churning, whether by hand or otherwise, should occupy forty or fifty minutes.

6. Washing in cold soft water is one of its preserving qualities, and should be continued until it shows no color of the milk by the use of the ladle; very hard water is highly charged with lime, and must in a measure impart to it alkaline properties.

7. Salting is necessarily done with the best kind of ground salt; the quantity varies according to the state it is taken from the churn; if soft, more—if hard, less; always taking the taste for the surest guide.

8. First working, after about twenty-four hours, is for the purpose of giving it a greater compactness.

9. Second working takes place at the time of packing, and when the butter has dissolved the salt, that the brine may be worked out.

10. Packing is done with the hands or with a butter-mall; and when butter is put into wooden vessels, they should be soaked two or three days in strong brine before using. After each packing, cover the butter with a wet cloth, and put a layer of salt upon it; in this way the salt can easily be removed at any time, by simply taking hold of the edges of the cloth.

Butter made in this way will keep any length of time required. J. C. ADAMS.

Seymour, Allegany Co., N. Y.

CULTIVATION OF CARROTS.

The carrot requires a deep, mellow soil, well manured, and if not dry enough naturally it should be well under drained. Chestnut sandy loam, or deep black soil? inclining to muck,are the best for this root. It should be well worked with plow and cultivator to make it fine, and subsoiling would improve it much. To prepare the ground for sowing, after plowing and cultivating, take a small corn plow and ridge the ground, turning two furrows together, leaving them about two feet apart from top to top.

I have practiced sowing in rows about fourteen inches apart, but have concluded from trial of both methods to sow this season in ridges. The advantages are, first: the soil is more mellow for the young plants to start and grow. Second: the rows can be more easily followed when the plants are small, which is very important. Third: they can be cultivated with a horse after they are large enough, and at harvesting they can be worked out mostly with the plow. I think the above are sufficient reasons for the latter method. I think the greatest crop might be raised by sowing them on a level surface, about twelve or fourteen inches apart, but the work is nearly double.

It is very important to sow good seed, which should always be tested before sowing for a crop, which may be done by sowing a little in a hot bed or in a little box set in a warm place in the house. The best time for sowing is about the 25th of May, but a good crop may be raised sown as late as the 15th of June. My rule is, to sow as soon as the ground is ready and the the weather warm enough to start the seed quickly. The seed should be soaked in warm water two days before sowing, and if the weather should be unfavorable, then the seed may be taken from the water, rolled in plaster, set in a cool place and it will not take any hurt for a week or ten days; if it is sprouted when sown all the better. If the weather is dry when the sowing is commenced the soil should be rolled after sowing, or the seed may be trod by following on the rows immediately after it is sown, and then lightly covered with a rake. I do not think any definite rule can be followed as to depth of sowing, but it must depend on the weather and the moisture or dryness of the soil; usually from half inch to one inch is deep enough.

I have always practiced sowing by hand, but there are machines that do the work well, and are said to be labor saving. The seed must be dry to work well with a machine. If the weather is favorable the plants will be up ready for the first hoeing in about two or three weeks, which should be done lightly as soon as it is possible to distinguished the plants—as a little work at this time will save much hard labor two weeks after. The first hoeing should be lightly done, just deep enough to cut up the weeds, as that is the principal object. Follow the second time in about a week, stirring the soil deeper and more thoroughly eradicating the weeds; after this the hand weeding must commence, which should now be done as soon as possible; do not wait to finish hoeing a piece of corn or potatoes, for by so doing you may have many days hard work weeding. When weeds begin to grow in the carrots, and they are large enough to weed, that must be done, if all other work stop for a day or two; one or two days delay may make a week in weeding; if the weather should be rainy, then look at the carrots all over grown with weeds, and the labor of weeding increased four fold. After the second hoeing and first weeding, the hard work to this crop is done and they can if properly tended be kept nice and clean the remainder of the season. When they are about two inches high they should be thinned so as to stand four or six inches apart in the rows, if the ground is rich, if not, they may stand nearer. This thinning is very important and should not be neglected, for much depends on it. They may be harvested as late in the fall as November, and I think they keep better by being put up late, and are not so liable to decay. If sown late they will continue to grow till the ground freezes.

This crop should be cultivated extensively by farmers generally, and may be raised at a cost of from seven to ten cents per bushel. A good crop is eight hundred bushels per acre, and if not more than four or five hundred bushels are raised the crop will pay as well as any other on the farm. The greater the yield the less the cost per bushel, and vice versa.

As food for horses, cows, neat cattle, and hogs they are not equalled by any other root; store hogs will winter well on them, and horses are very fond of them in the spring of the year when warm weather commences, and some value them as highly as oats. If worth only half as much, which is about my estimate, how much better is it than oats? Oats eighty bushels per acre on the same ground as the carrots at forty cents would be $32, and 600 bushels of carrots at twenty cents would be $120, leaving a difference in favor of the roots of $88; deduct $40 for cost of cultivation more than the oats and we still have a balance of $48 per acre in favor of the roots, which is profit enough to induce farmers to extend their cultivation as much as circumstances will permit.—They are excellent feed for fat cattle fall and spring, winter being too cold for profitable feeding.

Brighton, N. Y. E. S. H.

PLOWING.

Mr. Andrew Wilson of Augusta, near Prescott, C. W., in the March number of the *Genesee Farmer*, says: "Would Mr. Adams enlighten us as to the width of his furrows, for it is certain a horse cannot turn on much less than six feet and then the plow would naturally be three or four feet behind. Also to draw a furrow and return in the same track, appears to me a waste of time and labor." My furrows are twelve inches wide, which make six feet of the ten he thinks necessary for a "horse" and "plow" to turn on. Three for the balk, between the fence and ground after it is plowed, make nine. The other foot is gained by dodging the corners; and room to spare.

Mr. W.'s plan of "marking out" and plowing headlands will answer for the "benighted Canadians" and also for a double team. But for a single team to draw a furrow both ways on the headland, packed as it always is, appears to me both useless and cruel.

Seymour, N. Y. J. C. Adams.

Sow Lettuce with Cabbage.—Lettuce seed sown with cabbage will generally prevent the destruction of the latter by the fly. The lettuce should be pulled up as soon as the cabbage plants are out of danger. Try it.

Woodstock, Vt. R. W. S.

THE BEST METHOD OF FENCING A FARM.

Editors Genesee Farmer:—The question of the relative amount of division fence necessary on a farm, may be passed with little more than the general remark, that as much only should be made as the most judicious arrangement and farm management require, for the obvious reason that more would be a waste of land, labor, and means. It is plain that the amount required must vary according to the particular branch or branches of farming pursued. A farm, every acre of which will produce from thirty to forty bushels of prime wheat every two years, will be cultivated in wheat and clover exclusively, (the last to be plowed under,) will require but little division fence. When it is desirable to cultivate most kinds of grain, as well as rear and keep most kinds of stock on the same farm, much more is necessary. Between these extremes will be ranged all other grades of farming affecting this question. In all cases the above general rule should be adhered to; for a great amount of division fence is maintained throughout the country at an immense yearly expense, which is neither necessary nor convenient.

But the *kind* of fence best suited to general use, is the question sought to be determined. It may be remarked here, that no one method can be devised which shall be the best adapted to all cases, for it is evident that the best mode of fencing any particular farm, must depend upon its available resources for fencing materials—not necessary or valuable for other purposes.

The Common Worm Fence.—Some kinds of fence, long in common use, are so well known that they need only be mentioned to make apparent their comparative value. Such, perhaps, is the common rail, or worm fence. This, in countries covered with suitable timber, must always be the fence of the pioneer, (whatever may be its defects,) as it is almost the only available one of any value. This fence, once upon a farm, will of course remain until it decays, and the timber to replace it is exhausted or become too valuable, when other kinds less objectionable and of more permanent value will be sought.

Stone Walls.—This may be had in properly constructed stone walls, which is conceded to be the best fence known. This is valuable for its durability and the little land occupied. The first cost is not great, when it is considered that the cost of laying the wall only, is justly charged to the account of the fence; clearing the fields of stone being necessary, were no fence required. Where there are materials for this, none better need be sought.

Board Fence.—A very neat, and not expensive fence is made of posts and boards. Let durable posts and boards, sixteen feet long, and a full inch in thickness be procured. The bottom board may be from ten to twelve, and the other two from six to eight inches wide. The length is completed by a three-by-four scantling being spiked firmly to the top of the posts. Three boards and a scantling, with spaces properly arranged, making a strong fence four feet high, with about fifty feet of lumber per rod, exclusive of the posts. Any one may easily calculate the cost of such a fence, which will vary with the cost of lumber in the locality.

Wire Fence.—Wire fence, has so far, proved unsatisfactory in the experience of most who have tried it. It has some qualities to recommend it, but there are serious, if not insurmountable objections to it.—Beside the difficulty of guarding against the temperature, it is expensive, easily gets out of repair, is not claimed to be the most durable, and is not an effective fence. Such being the general verdict in regard to this kind of fence, it cannot be recommended for general use. The above kind of board fence is prefered, where suitable lumber can be had at any thing under extreme rates. The Lowell Pannel Wire fence is less objectionable, but the objections from temperature and cost lie against it with equal weight.

Hedges.—The next and last kind of fence I shall mention, is the hedge. This is a cheap, durable, beautiful, and most effective fence. The main objections to it are, liability to injury by mice under the snows of winter in northern latitudes, and the great amount of land necessarily occupied by it. The first it is confidently believed will be remedied, if not in the manner of construction, yet by the use of hedge plants only which mice will not attack. A supply of these may be had, it is believed, in all respects suited to hedging purposes. Several kinds of these have to some extent been tested. Among these are the Buckthorn, Newcastle thorn, and the whole family of evergreens. The thorns mentioned grow rapidly, making a strong fence in four or five years. Among the evergreens, the Norway Spruce and Norway Fir, are said to be of equally rapid growth, and to make, in all respects, a desirable hedge. An evergreen hedge is always beautiful, and by allowing a high growth, is also a good protection from the wind.

The second objection, it must be admitted, is of some weight in localities where land is very valuable. But I doubt not that it could be successfully shown, and allow its opponents their most extravagant claims as to the amount and value of the land occupied, that, in the end, (except stone wall,) it is the cheapest and *best* fence known. Most other kinds subject the farmer to constant expense for repairs and losses, because they are imperfect, and to the cost of a periodical reconstruction, and all this to be repeated as time progresses, without limit. It is therefore claimed that when its light cost and after expense, its perfect effectiveness and everlasting durability are considered, this will be apparent.

I would, therefore, bring to the notice of farmers a hedge constructed after the following plan. Where it is desirable to have a permanent fence, let the ground be deeply plowed, and a compost of swamp muck, leaves, ashes and barn-yard manure be well worked in. Draw a line for a guide in setting your quicks, that your hedge may be perfectly straight. Set your quicks in a line, from six to twenty-four inches apart, according to the hedge plant used. Quicks should be of two years growth in the nursery. Cut them off twenty inches from the ground. Keep the soil, for a few feet on each side, mellow and clear of weeds, which is all that is required the first year. Ascertain if any have failed to grow, and replace such with vigorous ones from the nursery. Then draw a line two feet from the hedge and parallel with it on the side where an open drain would be most useful. (Let division fence be located with reference to the efficiency of these drains, so far as can be done without detriment to the order, beauty and convenience of the arrangement of the fields.) Along this line open a ditch four feet wide on the top, six inches wide on the bottom, and two feet deep. Let the earth removed from the ditch be thrown around your hedge, raising a bed twenty

inches high, with slopes corresponding to the slope of the ditch, and forming a regular grade with it on that side. Cut back your hedge to within three or four inches of last year's cutting, and your work is done for another year. If the plashing system be not pursued, cut back again to within six inches of the last, when it may be allowed to grow, only shearing to give it the desired shape. The third year the part cultivated on each side of the hedge, and also the ditch, may be thickly seeded to timothy to keep out weeds and prevent the falling of the drain.

Some advantages claimed for this way of constructing hedge, are, that its position, on the top of this ridge, is a good security against mice; and this bed forms a deep rich soil, which will give a rapid and vigorous growth, and consequently early maturity to the hedge. And without adding to the width of land occupied, it furnishes also a drain; thus answering the double purpose of a fence and drain.

Where it is desired to make them a defence against wind, as well as a fence, a plant which attains considerable height and of rapid growth should be sought. The American Elm, (*Ulmus Americana,*) it is thought is such a plant. It is easily propagated, and grows well on all soils adapted to cultivation. The plan, already described may be followed, setting the quicks two feet apart. At the commencement of the third year let the plashing be done, which should, if possible, be done without much use of the knife. The shoots may readily be bent down without cutting, and fastened by a little twisting together. Leave a vigorous shoot, at every other setting, to grow up without further care, except what is necessary to give it a low bushy top.

Thus, a fence, and at the same time a screen from the winds, would be secured, which in fifteen or twenty years would tell in the most happy results in the bleak regions af our western prairies.

Perhaps some of the evergreens, if they can be propagated with facility, may be more desirable for this purpose.

From the south, we hear no objection to the hedge, where they have the most desirable of hedge plants in the Cherokee Rose and Osage Orange.

Leicester, Livingston Co., N. Y. A. W.

CULTIVATION OF THE MANGEL WURZEL.

For the profitable cultivation of the mangel, two things are indispensable: *first*, a strong, deep soil; *second*, thorough tillage. Sward, when rotted, produces the best of soil for every root crop. The ground designed for mangel wurzel should be plowed in July or August preceding, and tilled as for wheat. In the spring, as soon as the ground is in working order, apply ten loads of good barn-yard manure to the acre; spread it evenly over the surface, and plow under with three horses, taking narrow furrows, and allowing the plow to penetrate to the depth of one foot. After plowing harrow thoroughly, and, if needed, roll and cultivate, using a wheel cultivator; and then again lightly with the harrow. Then apply six good loads of fine, fermented manure, spread as before directed. Having done this, take a small plow and throw the land into ridges two feet and a half apart from centre to centre, turning a furrow each way so as to cover all the manure, but avoid plowing deeper than just sufficient to cover it. The ridging is intended for rather wet land. If the ground is dry, (naturally so,) ridge as before directed, and drop the manure in the furrow, and split the ridge with the plow, (a double mould board if you have it,) or apply one-third more of the unfermented manure, and cover with the cultivator, and smooth with the harrow. If the land is ridged, it will be necessary to pass lengthwise of the ridges with a light roller.

The ground is then ready for planting. There are two methods of planting—with the drill, and by hand. When planted by hand, the holes for the seed may be made with a wheel having pegs in its circumference, five or six inches apart, to penetrate the ground one inch. After the seed is dropped, it may be covered by passing the wheel of a barrow over it, which leaves also a slight rut for retaining moisture.

As soon as the plants can be readily discerned, the ground should be stirred with the hoe, and the plants thinned to one. As soon as they are large enough to admit it, a cultivator should be drawn between the rows; and if done two or three times, it will be a great benefit to the crop. At the second hoeing, each alternate plant should be removed, if not before destroyed—leaving the plants from ten to twelve inches apart.

I consider the mangel wurzel the most productive of all sorts, and the easiest to harvest and secure. They are excellent food for cattle, especially for milch cows; though not as nutritive for the same bulk or weight as carrots or Swede turnips. An acre of good mangels is, I think, equal to the same of any other roots. David Leatherseich.

Caledonia, N. Y.

THE MANAGEMENT OF SHEEP.

Any branch of agriculture to be the most successfully pursued, requires thought, reflection, observation, comparison, and economy. He who drives on business at random, without these, is almost sure to meet with disappointment. If success attend his efforts, it is oftener the result of accident than of skill.

This is emphatically true in sheep husbandry. Without careful attention, but little profit will be realized from this business. In order to meet with success, select a dry, elevated location. This is far preferable to low, wet, marshy land. Sheep dislike to wade in mud and water. It is important too, that they be kept *quiet*. They are timid in their nature, and ready to flee before an enemy. When worried by dogs or boys, who delight in the sport of seeing them run, they soon become wild and unruly. They are continually restive,—on the look-out for danger, and startled at every trifling noise. Such a state of excitement hinders them from feeding, and prevents their food in a measure from performing its proper office. And the effect will be apparent in their bodies, and in the quantity and quality of their fleece.

Sheep should also be kept in an enclosure by themselves. If suffered to run with other stock, they are robbed of half their food, especially in winter,—they are driven hither and thither by their superiors, and are continually liable to receive injury; their growth is hindered, and their fleeces damaged.

They should also have at all times a supply of nutritious food. True they may be kept on scanty and barren pastures, but this is not true economy. The effect will soon be seen in themselves, their offsprings

and their fleece. They should be kept constantly thriving. Ewes, especially in the spring and summer, need fresh herbage and an abundance of it. Much also depends on their management in winter. At this season they need not only to be kept quiet and well fed, but to be protected from storms and inclement weather. It is a mistaken notion that they can be left to shift for themselves at this season, to pick their food from the dry and frost-bitten herbage of the field, and to find a shelter behind the barn, or under the fence, or any other object they may chance to meet, and perhaps covered with the drifting snows during the night. With such treatment the system becomes chilled, they grow feeble, loose their appetite, their wool falls off, and many often die, and half the summer is needed to recruit their wasted system. Give them an ample range for exercise, but provide a comfortable shelter, where, when the thermometer ranges below zero, or the storm of rain, snow or sleet howls without, they may be securely protected, and fed. Let their shelter be dry and freely littered with straw, and the manure obtained will compensate for all the trouble of doing it. Give them a supply of good bright clover or other hay, and a little grain—And to compensate for the absence of fresh herbage, let them have a supply of roots, turnips, carrots, or rutabagas. Sheep soon become fond of these, and thrive much better than on hay alone.

It is desirable that sheep at all times have access to pure running water. They will exist for a long time without this, and this leads many *thoughtless, unobservant* farmers to suppose that it is not necessary. But when they can have access to it, you will find them resorting to the brook or spring much oftener than other stock. The idea that they can satisfy thirst by eating snow is absurd. Let their owner try this experiment, and see how he will succeed. Salt should also be kept in boxes or troughs, where they can have free access to it, mixed with a little tar, especially in summer.

Great care should also be taken of the health of the flock. Too many should not be crowded together, for in this way disease is often produced. Fifty is enough to run together in any enclosure. And when by careful watchfulness, symptoms of disease are discovered, the invalid should be immediately removed, least the infection spread. A great loss is often thus prevented by a little timely precaution—The shepherd needs to be a minute observer, and to keep watch over his flock continually, if he would meet with success in his occupation. HUBERT.

WHEN DOES WOOL GROW?—I answer, when it is wanted to cover the sheep and keep it warm. From the time the sheep is sheared until the frost comes, you can see the shape of every clip of the shears; when the frost and cold weather comes it grows out immediately. Now, if you wish for a heavy clip feed when the wool is growing. If you have any extra feed then is the time use it. The wool draws very hard upon the carcass and growing out fast deceives almost every farmer. They think their sheep are doing well when they are growing poor. I can make an additional pound of wool with one bushel of corn, and my sheep will afterwards winter one bushel of corn easier. Let your sheep get poor while the wool is growing and you cannot recruit them until the next summer. J. D. CHAMBERLAIN.

Waterford, Ohio.

EXPERIMENTS ON INDIAN CORN.

WE plow as deep as we can, taking all things into consideration, and harrow, if on sward land, lengthwise of the furrows so as not to turn up the sods, then furrow it crosswise in order to have it mellowed deep where the hills come, and mark the other way with a corn marker. Seed corn wet with tar water and rolled in a mixture consisting of one part No. 1 Peruvian guano, and three parts plaster, will hardly be disturbed by the crows, and the guano gives it an earlier start, the plaster preventing it from burning the corn, and it also attracts moisture in dry weather, and by that means you get a more thrifty growth.—Two years ago we tried an experiment on a piece of worn out meadow—a sandy loam, dropping in each hill about a tablespoonful of hen manure, as much ashes, and half as much plaster, throwing a little dirt over the hen manure and plaster, so it should not touch the corn, and then dropping the ashes and corn on it. The after work done to it was once going through it with a cultivator and once with a double mould-board plow; it was also hoed once, but when we cut it up the ground was covered with weeds which grew after the hoeing; yet we harvested at the rate of 160 bushels of good merchantable ears to the acre.

By an experiment made the last season on the white flint corn, I am satisfied that three feet ten inches apart each way, is as close as it will pay to plant that variety. We let out a piece to plant on shares, to an old fogy farmer, who planted it three feet apart each way, and plowed and pretended to hoe it twice, while we planted another piece three feet ten inches each way, plowing it once and working once with the cultivator both ways, but not hoeing it, and we harvested double the amount from the same quantity of land, on the widest planted piece that we did on the other. The larger the variety of corn the more room it requires to perfect itself.

MYRON E. TANNER.

Clarkstown, Rockland Co., N. Y.

ON THE MANAGEMENT OF SWINE.—As soon as the young pigs are old enough to drink, they should be plentifully supplied with milk. Through summer they should be allowed to graze in a good field of clover, and should have a quantity of swill, mixed with chopped grain, twice or three times a day. Be sure and not keep more hogs than you are able to keep well. When hogs have been thus kept through summer, half the trouble of fattening is over. As soon as they fail to get a good supply of food in the fields, they should be shut up in a warm pen, with plenty of bedding. Feed them three times a day. I believe the best feed is corn, ground or chopped, and then soaked or steamed, or made into mush.

Ayers, Pa. W. H. M.

CULTIVATION OF POTATOES.—Turn over green sward; plant in drills three feet apart; drop whole, medium sized potatoes, ten inches apart, in the rows; apply half a handful of composition (consisting of two parts ashes, two parts plaster, and one part lime,) to each hill, at the time of planting, and the same quantity on the hill before hoeing the first time. The last two years I have planted after the above method, and have raised good crops of sound potatoes.

Sheepscot Bridge, Me. G.

LARGE VS. SMALL BEANS.

Messrs Editors:—I tried an experiment last season, to satisfy myself, which were the better beans to plant, and give you the result, as follows: The small beans give nine and a half bushels from one of planting, and the large ones thirteen and three quarters from one of planting. The land was light, as you see by the crop, but equal in both cases. I concede that a bushel of small beans, will plant as much land as three bushels of large ones, and many will conclude from this that there is four dollars saved in the item of seed. To such I would say, "don't be hasty gentlemen." Don't you have to plant three times as many hills to get out a bushel of small, as you do of the large beans?—and then they fall four bushels short of the large ones in product. Here then is a saving in favor of the large beans of two thirds of the labor and a gain of more than one fourth in product from a given quantity of seed.

I plant beans north and south, if possible, rows three feet apart, and eighteen inches apart in the row, about six beans in a hill.

I planted last season, three and one half bushels of beans in my corn field, the product of which I sold for about $100, expenses as follows:

Planting with Wakefield's patent corn planter,	$3.50
Seed,	7.00
Pulling and cutting,	6.00
Threshing and cleaning,	7.50
Total expense,	$24.00

You will preceive there is no item in the expenses for hoeing. The reason of this is, that I plant the beans within four or five inches of the hill of corn, and they are both hoed at one and the same time, without extra labor.

I plant the beans the south side of the corn; pull the beans and hang them on the corn hills, and let them remain, until the corn is ready to cut up. They are then thrown down into heaps, the corn cut and set up; at which time I can drive the team and get them, as I do hay in tumbles. W. L. B.

Brandon, Vt.

OBJECTS OF PLOWING.

Editors Farmer:—When following the plow, my thoughts are ever busy on various subjects, and among them have been meditations on the query, "What are the objects of Plowing?" A simple question, the reader may think, but one which the farmer cannot give too thorough an investigation. Let us state (without particular care as to method) some of the reasons for the practice under consideration:

1. We plow to secure a seed-bed of fresh turned soil for planting or sowing.

2. We plow to destroy one crop (of weeds or grass) in order to produce another.

3. We plow to bury growing vegetation, as a means of increasing the fertility of the soil.

4. We plow to bury manures, for the same purpose.

5. We plow to loosen and pulverize the texture of the soil, the better to fit it for growing plants.

6. We plow to bring up a fresh portion of the soil to the sun, rain and air, as in summer fallows and fall plowing.

Here arises another question—one full of importance to the farmer—"*Does plowing, as usually performed, accomplish the desired objects?*"

1. Do we get a seed-bed of fresh turned soil for plowing or sowing? Not unless great care is taken to leave no *balks* or unplowed spaces.

3. Does plowing destroy the crop of grass or weeds, as desired? See for yourselves, and answer. Does not much that is called plowing fail wofully here?

3. For this reason we lose the full benefit to be derived from plowing under green crops.

4. And also barn-yard manures. They are not fully buried under the soil, and no plow can mix them, as usually applied, with the soil, as should be done to get their greatest immediate effect.

5. To loosen and pulverize the soil, we must cut deep, narrow furrows, instead of wide, shallow ones. And the *plow* (and the harrow) is an imperfect implement for this purpose, but the best yet known. Properly employed, it can do much more than is generally accomplished. We are too anxious for "progress," and so plow wide, shallow, flat furrows, which "cut and cover," not break up the soil.

6. Summer fallow, with repeated plowings, aerates and pulverizes the soil. So does fall plowing, by exposing it to the action of the frost—if, *first*, the plowing be well done—furrows deep and narrow, and lapping each other; and *second*, proper drainage be provided, so that no water be compelled to pass off *by evaporation*, for want of other outlet.

Fineness and depth of soil are wanted to secure the best growth of any crop. It should be penetrable to every minute root, and the manure should be thoroughly incorporated therewith, that it may supply the demand for food. It should be open to the influences of air and moisture, and ready outlet be provided for all surplus of the latter.

But there is no end to the suggestions which this subject calls up. May I leave it for your readers to *think out* for themselves? B. F.

FARM HOUSES IN MICHIGAN.

Messrs Editors:—I have taken a good deal of interest in the building department of the *Farmer*, but find that most of the plans are rather expensive for this new county where many of the original log cabins are still occupied, and very few farm houses cost over one thousand dollars.

The houses recently built in this vicinity (Oakland Co., Michigan,) though individually dissimilar have generally a strong family resemblance, viz:

Main building, gable end to road, story and a half, about 18 × 26 feet, nice room, bedroom stairway with cellar stais underneath, about two rooms above, cellar whole size, with hatchway door outside. Front door ornamental, seldom opened except on wedding and funeral occasions. Wing, one story, containg living room, bedroom, frequently a bed recess, pantry and woodroom. Sometimes a part of the woodroom is used for a cookroom in summer, but generally, let the house be ever so large and convenient, a rough, leaky board shanty must be stuck on back for the especial benefit (?) of the cook and cook stove in hot (or showery) weather. Solon Cooley.

Four Towns, Ockland Co., Mich.

Remarks.—[We should be glad if our correspondents in different parts of the country, would furnish us with plans of *cheap* and convenient farm houses.] —Eds.

AVERAGE INJURY FROM THE WHEAT MIDGE.

Messrs. Eds :—In the February *Farmer*, while discussing the feasibility of continuing "Wheat Growing in Western New York," you estimate the usual injury from the midge at five bushels the acre, be the crop more or less. A yield of ten bushels, will be one half destroyed, one of thirty, one-sixth, and so on. The latter will leave a fair profit, while the former will scarcely pay for the labor bestowed in its culture. Hence you advise the selection of suitable soils, as to fertility and character, and early maturing varieties, so as to increase the product as far as possible beyond the destructive power of the midge. In most of your suggestions, I coincide, and will here state some facts which have fallen under my observations on this farm.

In 1854, our wheat crop was somewhat injured by the winter—on the low land, nearly destroyed. The average product expected, was from twelve to fifteen bushels per acre, but the midge attacked it, and on harvesting and threshing, we realized from six to ten, according to the vigor of the growth and the promise of the crop before the midge appeared. In 1855, our wheat looked better, and that part sown to the golden drop, even after the midge had done its worst, (it ripened too soon for it,) promised us twenty bushels per acre. The wet weather sprouted it repeatedly, before and after cutting, and damaged it far more than the midge. Between the two, the product was about eight bushels per acre. Another field of a later maturing variety, promising well, was almost entirely destroyed by the midge, and finished by the wet weather at harvest. In 1856, we sowed our wheat on pretty good land, some of it too light, perhaps, but it appeared favorably, in parts stout, and was estimated as full up to twenty bushels per acre. This was also, golden drop, an early maturing variety. The midge came, and for a time it seemed that there would be nothing left, but the centre of the field was injured comparatively little, and the product on threshing was fourteen bushels per acre.

You can draw what conclusions you please from the above facts. *I think*, by selecting good soils, early varieties, and cultivating in the best manner, we can still raise wheat profitably in

Niagara County.

SOWING PARSNEPS IN THE FALL.

Messrs Editors :—I observe in your January Number, an inquiry as to growing parsneps by fall sowing. If my experience is of any value, it is quite at your service.

Some years since, I sowed some parsnep seed in the last of April. It came on very cold, and the seed did not appear above the ground till the 10th of May, and then only sparsely. A little rain fell on the 12th of May ; and from that day until the 24th of June not a drop of rain fell, and the season throughout was very dry. Of course my seed not sprouted before the 12th of May did not germinate after that. The ground (having only half a crop) was well cultivated, and was in September free of weeds. About the 1st of September, rains falling, the soil became moist and in fine condition. About the 28th of September the ungerminating seed began to sprout, and in three or four days the vacant spaces were all filled. The crop stood through the winter. In the spring all those which had come out of the ground in May, were dug and used, except some quite small ones. The September started plants looked well and commenced to grown in March, which was a fair month for this latitude. I paid no attention to them till May, when I had them weeded. In April, however, I filled up the vacant spaces, (from which I had drawn the used parsneps,) with seed. The season was a good one, this second year, and the seed of the second year's sowing grew finely and plants did well, as did those which sprouted in September of the first year. All the plants of both sowings growing beside each other, and scattered among each other, were treated alike in all respects. There could be no advantage of the one set of plants over the other in any regard, either of soil or care.

The whole crop, composed of both sowings remained in the ground till the third spring, (two years from the first sowing), when all were dug and used. The two sets were separately dug, and the yield on the parts where the plants had stood two winters, was forty per cent more than on the other.

This was a field crop, and the seed used in both years was the same kind, being grown from plants, the kind of which had been long grown in my garden.

A few of the plants which germinated in September, showed a disposition to go to seed in the second year, perhaps twenty in the whole piece of two acres. These were pulled. In other respects the crop of September germination went on as if sown in spring.

This chance growing of an autumn crop, induced me afterwards to grow parsneps by fall sowing wholly for three or four years. And they *always germinated*, and I had no failure in sprouting and they always yielded better than with any spring sowing. I have not for some years grown them at all, except in my garden. But there the fall sowing is always more successful in point of certain germination and larger product.

I can confidently recommend a trial of the fall sowing in preference to that of spring.

Batavia, N. Y. A. Stevens.

BUYING WESTERN LANDS.

Messrs Editors:—Without doubt many of your readers are longing for homes at the west, on lands which they suppose can be bought at government price readily enough. And so they ought to be, but there are such shoals of "land sharks," (so called here) or speculators, that they absorb *all* the best claims as soon as the lands are offered for sale. So extensive is the business done in this way by these cormorants, that a large proportion of actual settlers have to buy their lands of dealers, at double and many times more than double, the usual cost at government price.

Any eastern man desiring land at government price, had better come in the spring and enter or pre-empt his land, and not be too sanguine of obtaining it even then in Iowa, Wisconsin, or Illinois. Perhaps as good a way would be to secure the services of some trusty individual, engaged in such business, to enter land for you. The usual charge for services is twelve and a half per cent. on the money invested. Much good land will be sold in Iowa and Wisconsin, when the offices open again at double the usual rate, or twenty shillings per acre. Jno. Sanfield.

Illinois.

CULTIVATION OF ARTICHOKES.

Messrs Editors:—All our domestic animals will eat the artichoke eagerly; horses, cows, sheep, hogs, geese and hens, all eat and get fat on it. I have raised it on a small scale for years. *It never fails.* Hogs can be raised from sucking pigs on this vege table alone, except water. I have had them shut up where they could get nothing but artichokes for many weeks at a time, and they grew beyond all example.

The artichoke stands drought and everything else but shade, better than any other crop. (It does not root well if too much shaded.) It grows on the poorest of land, may be planted at any time from October till the middle of June; and if planted early, and pasture is scarce, it may be pastured till other pasture comes forward. The tops make better fodder than hay. It may be propagated by planting the branches when seed is scarce, either early or late, but if this is done as late as July or August, the plants will only grow large enough for seed; but if it is done in May or June, the plants will root well. The plants do not form much root till late in the fall, and the ground should not be plowed after harvest, as many of the shoots on which the roots grow run some distance, and the plowing would cut them off.

If artichokes are planted on rich ground in rows about as close as corn, they will be too thick and shade the ground too much; but this may be obviated by cutting off some of the stalks and curing them for fodder. The yield of tubers will still be good—five time as much as corn. If planted in poor soil, they will not have much top, but will root well. The hogs may be turned into the field and they will root up the artichokes for themselves. Penn.

CULTIVATION OF INDIAN CORN.

Whatever difference of opinion may exist among farmers in regard to the cultivation of Indian corn, nearly all agree on one point, viz: that green-sward, plowed either in the spring or fall, constitutes the best foundation to commence on.

I plow green-sward late in the spring, that is, allowing only sufficient time for planting in season, having previously applied all the manure. By this late plowing, the grass is easier kept in subjection than by plowing in the autumn.

Depth of furrow according to circumstances, the nature of the soil, &c. Plowing done, the ground should be thoroughly pulverized with the harrow or cultivator; I prefer the former implement, as the cultivator too frequently tears up the seed. Plant from 25th of May to first of June, in this lattitude. Rows three and a half feet apart, and hills two feet in the rows. Some plant three feet each way, but this does not give so many hills, and although the labor of hoeing may be less, I do not consider it sufficiently so to pay.

In hoeing, use the cultivator exclusively—the plow disturbs the roots too much. Hills should be made flat or hollow on the top in order to catch the rain. For a fertilizer I consider ashes as good as any thing to give the corn a good start. If leached, apply after plowing and incorporate by harrowing. If unleached, put a handful on each hill at the first hoeing. When the corn has begun to glaze on the small end of the ear, cut and set up in stooks of six or eight hills each to cure. S. S. B.

Potsdam, N Y.

DEVON AND DURHAM CATTLE.

In a district of country where feeding, milking and working are required in the same animal, the North Devon is superior to all others, being hardy, speedy, and easily broke to work. The oxen, when turned out from work, feed easy. The cows, when dry, acquire flesh easy. As a general thing, the Devon cows rank among the highest class for dairy cows, their milk being very rich. They will stand the extremes of heat and cold well, and will live well on rough pastures. In fact, I believe the North Devon, or its cross with the Durham, is the best calculated for all districts of country in the United States, north of 40 or 41 degrees of north latitude. The Devons are very muscular, and of a uniform color, (dark red,) and their horns an ornament to working cattle.

In a district of country where beef is high, and feeding alone is required, the Durham is the best, as they mature early, and grow large, where the climate and pastures are congenial to them. Animals of a rapid and large growth, are less hardy and shorter lived than those of a medium growth or size. As a general thing, the Durhams are not calculated to milk or work, being slow, tender, and less muscular; milking being by chance—only some families good. They are best calculated for south of 40 or 41 degrees, where pastures are more luxuriant, and climate more congenial to them. •B.

Sandy Lake, Mercer Co., Pa.

BEANS AS A FIELD CROP.

Messrs Editors:—I noticed in your January number a communication over the signature of "A Young Farmer," requesting bean growers to give facts in regard to producing them. I will give a statement of one and one-fourth acres planted with a variety known as the marrow fat bean—a large, very white, and in my opinion the best variety for this latitude.

Dr. Plowing and fitting land,		$3.00
1 bushel 10 quarts seed,		3.00
9 days work planting and hoeing,		9.00
8 " " pulling and threshing,		8.00
Interest on land,		5.00
		$28.00
Cr. 30 bushels of beans sold at $1.96 per bush.,	$58.80	
1½ tons bean straw $6.00 per ton,	9.00	$67.80
Net profit,		$39.80

But few farmers comparatively know little or nothing of the value of bean straw for fodder. It is worth as much as the best hay per ton for cattle or sheep, and the manure form a ton of it, is worth as much as from two tons of hay. W. L. B.

Brandon, Vt.

To Kill Bugs in Seed Pease.—On the day of sowing, put the peas into a tub, or barrel; pour on hot (not boiling) water, sufficient to immerse them; let them remain about two minutes, or until the bugs are dead; then turn them into a basket, or something that will separate them from the water quickly, and they can be sown without applying anything to dry them. This has been my practice when I have sown peas for a field crop.

The degree of heat required can be ascertained by trying a few, before applying the water to the whole.

Euclid, Cuyahoga Co., O. J. Perkins.

CULTIVATION OF INDIAN CORN IN KENTUCKY.

The cultivation of Indian corn, receives very considerable attention in this part of the country, and our best farmers do the thing up about as follows:

After they have selected a portion of the farm most suitable in their opinion for such a crop, they take (if the land is middling fresh) a large turning plow, with two horses or a yoke of oxen, and plow the intended corn field thoroughly, across the last plowing. And in the meantime they have a second team carrying a large harrow in lines parallel to those drawn by the plow. After all this is done, they turn both plow and harrow across this late plowing, and repeat the operation when the land is in good order. Care must always be taken *not to plow when the ground is too wet*, as this materially injures land by forcing the soil into hard clods.

When the soil has been well prepared as above described, they will take one horse and a shovel, or bull-tung plow, and run furrows across the last plowing four and a half feet apart, and parallel to each other, after which cross furrows are run, in which the corn is planted; the furrows running perpendicular to these serve to mark the point for each hill. When the corn is an inch or two inches high, a bull-tung plow is run close to it across the planting, this leaves it fair to the sun on both top and side of the rows. In a week or ten days it is cross-plowed in the same manner, and if the soil is not foul, with the same plow, but if so, with a small turning plow. And when this has been done and a week or two has passed, the small turner is taken and the bar or shear, as the size of the corn will admit, is run next to the corn for the first time. And finally in ten or fourteen days it is laid by, by cross plowing in the same way. We plant in April or May, and lay by in July. J. N. Boas.

Exchange, Ky.

Fall Plowing for Spring Wheat.—In the spring of 1854, as the season was backward and wet, and the ground not having been plowed the fall previous, I did not sow my wheat till the 10th of May; consequently, as the insects preyed upon it, and that which escaped their ravages rusted, I had not half a crop. I then altered my plan, and plowed the ground in the fall, and sowed it the 6th and 7th of April, 1855, before the frost was out, so that the frost bore up the horses. I sowed about two acres, and put on about four bushels of seed, and I afterwards harvested sixty-two bushels of good wheat. I prepared the ground in like manner the next fall, and in April, 1856, I sowed five acres, putting on nine bushels of seed; but having to wait for the snow drifts to get melted off from the borders of the field, it gave the frost an opportunity of getting out to the depth of eight or nine inches, consequently the grain was harrowed in too deep—it being a flat, heavy soil, and full of water while the frost was coming out; consequently a great portion of the seed rotted in the ground, but what came up branched and thickened, and grew famously—and notwithstanding the ravages of the mice and rats, I had one hundred and ten bushels of full, plump wheat. Now, I think spring wheat should be sown as soon in the spring as the frost is out of the ground to the depth of four or five inches. No insects have injured the wheat when the ground was plowed in the fall and sown early.

Vienna, C. W. Andrew Chute.

RAISING CLOVER SEED IN MASSACHUSETTS.

Clover seed is as profitable a crop as any that can be raised in this section of the country, and we have had very good success in producing it, in the following manner: First, the ground is fitted for corn, by spreading on a good coat of barn-yard manure, and plowing in to a fair depth; then, at the time of planting, put on a compost made of ashes, plaster and fine manure, which is all the manure used until the clover is taken off. After corn we put in oats, which are followed by rye, with which crop we put on the clover seed in the spring, about the time the snow goes off. The ground should be well plowed and harrowed for all the foregoing crops, and left as light and mellow as possible. The quantity of seed used may vary with the quality of soil. We sow from four to six quarts to the acre. The crop may be fed off the following spring, and as late as June if the season is right, and no damage will accrue to the yield; but we do not practice it, for the following reason: if the "times" should be dry when the stock are taken off, the growth may be "cut." Nothing is done through the summer but to see that no foul weeds or grasses get in. We generally cut it the latter part of August or first of September, leaving it in the swath a few days to dry, or cure. We then rake it into small rolls of about a forkful each, doing it while the dew is on, to prevent shelling. We thresh it off the straw by hand, and have the seed ground out by machinery; the charge for getting it out, together with fanning and putting up ready for market, being $1.50 per bushel. The high price of this seed with us makes it a good crop, as it costs little labor and expense, and leaves the ground in good condition for corn. F. R.

Sheffield, Berkshire Co., Mass.

Eating off Wheat in the Spring.—In the February number of your valuable journal, I find that the subject under consideration, whether the cultivation of wheat shall be abandoned in Western New York, because of the ravages of the weevil. I will inform you what I consider will counteract the mischief. It is admitted that if wheat could be sown early, it would receive but little injury from the midge; but this cannot be done on account of the Hessian fly. Sow in August, (the earlier the better) on a well prepared fallow. In April following, turn on sheep, and eat off as closely as possible. (Calves might answer, when the ground is dry, if sheep cannot be had, but I never knew them used.) This will entirely destroy the Hessian fly, and the wheat will ripen quite as early—soon enough to be out of the way of the weevil. When this method shall have been tested, I think there will be no necessity to abandon wheat growing in Western New York, as I have known it tried, with perfect success.

Euclid, Cuyahoga Co., O. J. Perkins.

Hoven in Cattle.—You request your correspondents for information on "Hoven in Cattle." Let me say I have found the best relief in twisting up a large band of hay or straw, introducing it into the mouth and tying it up tight behind the horns, so as to keep the animal with its head up and its mouth open; the gas is thus evolved from the stomach, and speedy relief is obtained. Charles Palmer.

Mansfield, Ohio.

SUMMER MANAGEMENT OF SHEEP.

In the spring do not turn your sheep into the pasture until it is well up, or until it is ancle high, so as to have something to shade the ground; keep your sheep close and feed them hay and grain of some kind—they will eat it well if kept from grass. When put upon pasture have three or more fields and change them often so that their pasture may be sweet. I have known a neighbor loose three hundred sheep out of six hundred in one summer. He divided them into three parts, and put them into three large fields, with no shade except what the fence on the south side of each field made. The sheep lay along the fence, and when the nose fly came the sheep were to be seen running with their noses to the ground, fighting the fly, and eating only just enough to keep life in them. The sheep did not go more than eight or ten rods from the fence and this was eaten close to the ground when there was plenty of pasture on the north side of the field; as a consequence the sheep poisoned themselves in their own filth. The fly laid its eggs in the nostrils of the sheep and they soon died in great numbers of "worm in the head."

Now, you would ask, how should he save his sheep? He should have put them all into one field and forced them to go farther from the fence; and about two or thre days after the first shower he should have changed them to another field. Whenever you see your sheep run with their noses down to the ground, drive them to your fartherest pasture; the fly will stay about where the sheep have lain. Keep changing them from field to field and you will not be troubled with "worm in the head." J. D. Chamberlain.

Waterford, Ohio.

CULTIVATION OF INDIAN CORN IN MAINE.

Plow in, eight or ten inches deep from forty to sixty loads (half a cord to the load) of new made dung, per acre; harrow fine; furrow three and a half feet apart; place a small shovel full of fine old rotten manure, or a small handful of hen manure three and a half feet apart in the rows; drop six kernels of corn in each hill, cover two inches deep; spat the hill well down with the hoe—it serves to break lumps and prevent the hills from drying up. After the corn is up apply a handful of wood ashes to each hill; pass through with the cultivator; follow with the hoe.—Second time of hoeing pull out all but four or five stalks to the hill. Plant early and do not let it stand out too late in the fall. If you are troubled with crows and other birds tar the corn and roll in plaster.

Sheepscot Bridge, Me. S. K. G.

STABLES FOR HORSES.

Messrs Editors:—I agree with your correspondent in regard to docking horses. It is one of the most barbarous acts that was ever practiced in an enlightened and civilized community. The horse is abused in many other ways besides the one alluded to. It is just as essential for the health of a horse to keep him clean and away from filth, as for man.

The stable should be about fourteen feet from the floor to the loft, so that no horse can strike his head against the joist, and for good ventilation. The floor should incline at least two inches from the manger to the rear of the stable. Partitions between stalls should not be less than seven feet high at the head, and five at the rear; the upper edge being lined with plate iron to prevent the horses from eating it. The stalls should be from five to six feet wide. This will allow the horse to lie down and get up with ease.—Horses are very often hurt in lying down and getting in narrow stalls.

Farmers should make it the object to keep their stables neat and clean. There are more horse diseases caused by a dirty stable and impure air than by all other things combined. R. J. S.

Clintonville, Ohio.

Poll Evil.—I noticed sometime ago, an article from one of your correspondents, asking for a remedy for the oll evil. I cured a horse of that disease last spring, of over a year's standing, with the following recipe, and have heard of a number of horses that were cured by the same, but cannot give the *modus operandi*. The remedy, however, is based upon the theory that the poll evil is caused by a hardening of the *ear wax*, thereby creating inflammation, &c. This I know is contrary to the usually received opinion of the writers on the diseases of the horse, &c. The receipe is as follows:

Take of gun powder, blue vitrol and coperas, each one once; soft water one quart; dissolve and wash the poll and roots of the ear with the above solution warm; then take common glass, pulverized fine and sifted through book muslin; four table-spoonsful fresh butter melted, half pint—mix. Put a ball about the size of a small hazlenut *into* the ear, once or twice a week. Be particular to keep the sore washed clean.

I confess I had no confidence in the above remedy when I commenced using it, but in less than two weeks from the time of commencing the treatment, to my astonishment the discharge had entirely ceased, and the sore healed up. There can be no danger in applying the above, provided the glass be *perfectly pulverized*. W. A. Sawyer.

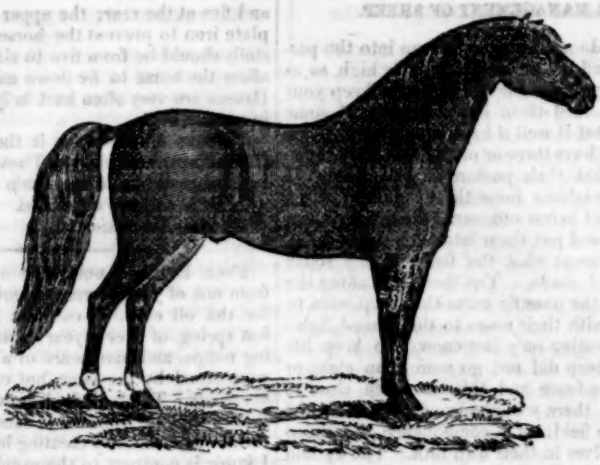
Earlville, Ill.

Best Means of Destroying Weeds.—There are few weeds that can withstand the combined operation of the plow, the cultivator, and the frost. Plow the ground soon after the preceding crop is taken off, and as soon as the weeds get a good start cultivate thoroughly, and deep enough to stir up another crop of seeds. Repeat with the cultivator as often as there is a green shade to the field, until winter draws closely on, when the plow should go through again, not deeply, but a little below the track of the cultivator, and sufficiently wide to leave the ground in small ridges.

The best and only means of destroying yellow dock, is to pull them up before they blossom and carry them into the road, where they will be trampled to death. D.

Gates, N. Y.

Agricultural Papers.—What the telegraph, the railroad, and our excellent postal system is to the business world, the agricultural paper is to the farmer. It records, heralds, describes, recommends, advises, cautions, announces, appoints, advocates, persuades, advertises, urges, and improves the farmer to his benefit; making him more prosperous, wealthy, wise, enterprisng, cautious, observing and industrious. But to this end farmers must write for, as well as read agricultural papers. J. S.



FLYING MORGAN.

FLYING MORGAN.

This celebrated Morgan horse was foalded in 1843, the property of R. M. Adams, of Burlington, Vt. Sired by Hacket horse, g. sire, Gifford, g. g. sire, Woodbury, g. g. g. sire, Justin Morgan. Dam sired by Woodbury. Flying Morgan is 14 hands high, and weighs 900 lbs; color, blood bay, with white hind feet. When five years old he was sold to Dr. Wm. Russell, of Middlebury, Vt., but Mr. Adams repurchased him the following year and has owned him ever since. He is a horse of a great deal of bottom and power; trots perfectly square and fair; goes smart; is perfectly sure for all he can do, and generally makes his best time the last heat. From heating and overwork, his eyes have been injured, and he can see but but little

In March, 1850, a race on the ice, mile heats, best two in three, was won by Flying Morgan, in two straight heats, beating Tramp. Time 2m. 51s.—2m. 48s. In a race over Cambridge Park Course, October 2d, 1851, mile heats, best three in five, between Flying Morgan and Cleopatra, the former was victorious in three straight heats. Time, 2m. 51s.—2m. 51½s.—2m. 57. In this race Flying Morgan was called Burlington.—*Linsley's Morgan Horses.*

Sheep Should not be kept too Long in a Small Field.—Sheep have a great relish for the sweetest and most fattening productions of the earth; no animal has a greater dislike to coarse, rank grass, consequently, they run over and tread it down in search of the best and sweetest food. This, however, is not all, sheep are a strong scented animal, and wherever they huddle for any length of time, they spoil the grass, and do not thrive, which plainly shows that they require plenty of room. If the fields are small, change them often. G.—*Woodstock, C. W.*

Sheep, when first turned out to grass in the spring, should be housed on cold nights. If troubled with the scours, drench with half a pint of milk porridge thickened with two table-spoonfuls of wheaten flour. We have rarely known this remedy to fail. If two or three doses do not effect a cure in as many days, add ten drops of laudanum.

To Prevent Smut in Wheat.—Wash the wheat thoroughly till the water becomes clear—or in other words, till it will no longer rile the water; then take blue vitriol, an ounce for every bushel of wheat you have washed, and dissolve it in hot water, and pour it into the tub, cask, or whatever your wheat is in, as the wheat must be covered with clear water at the time, and let it soak in this vitriol water for not less than six, or more than twelve, hours. This process should be carried through in the morning, and at night drain off the water, and the wheat will be fit to sow the next morning. It will be necessary to stir the wheat occasionally with a shovel while it is soaking in the vitriol water, as it tends to scour it, and makes it look bright. If this is done thoroughly, it will be a permanent cure for smut, either in spring or fall wheat.

Andrew Chute.

Vienna, C. W.

SOWING AND REAPING.

Sow with a generous hand,
Pause not for toil or pain,
Weary not thro' the heat of summer,
Weary not thro' the cold spring rain;
But wait till the autumn comes
For the sheaves of golden grain.

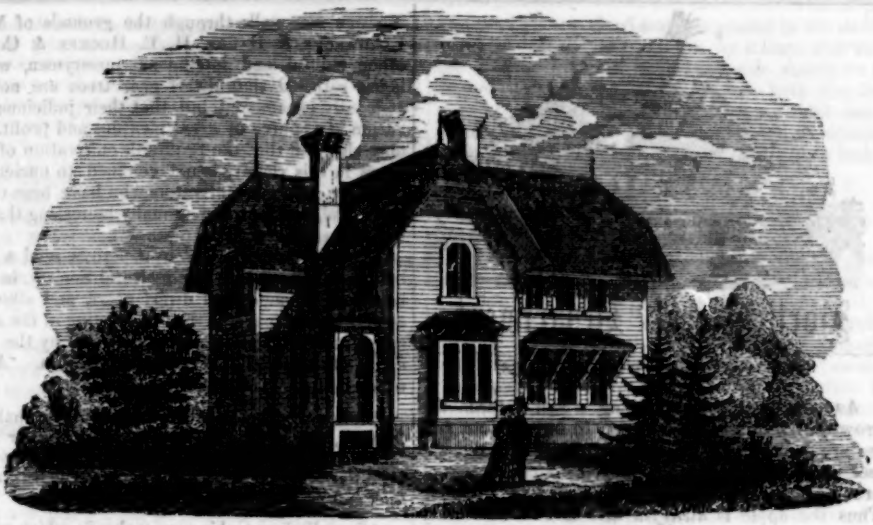
Scatter the seed, and fear not
A table will be spread;
What matter it if you are too weary
To eat your hard-earned bread?
Sow while the earth is broken,
For the hungry must be fed.

Sow—while the seeds are lying
In the warm earth's bosom deep,
And your warm tears fall upon it,
They will stir in their quiet sleep,
And the green blades rise the quicker,
Perchance, for the tears you weep.

Then sow—for the hours are fleeting,
And the seed must fall to-day;
And care not what hands shall reap it,
Or if you shall have passed away
Before the waving corn-fields
Shall gladden the sunny day.

Sow, and look onward—upward—
Where the starry light appears—
Where, in spite of the coward's doubting,
Or your own heart's trembling fears,
You shall reap in joy the harvest
You have sown to-day in tears.

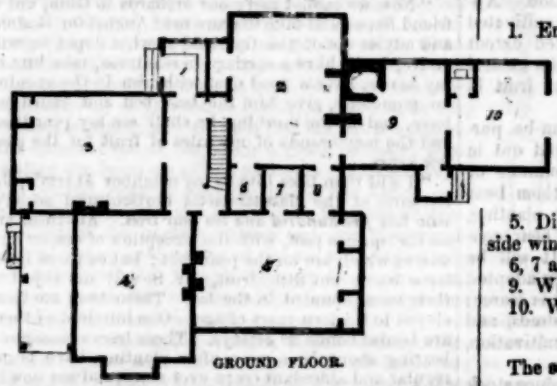
[*English Paper.*



FARM HOUSE—FRONT ELEVATION.

DESIGN FOR A FARM HOUSE.

The erection of good, substantial, conveniently arranged farm houses, is a pleasing indication of the increasing taste and wealth of the agricultural community. Men, it is said, are the architects of their own fortunes, and, in America, women are the architects of their own houses. The former are acquired little by little, the latter are built quite frequently in the same way. Some of them are curious specimens of architecture, but nearly all of them are convenient. We have not the slightest hesitation in saying that American farm houses, for adaptability and comfort, are not excelled by those of any other country. Still there is room for great improvement, and the knowledge acquired in altering and enlarging our old houses cannot fail to be of great service in designing new ones.



GROUND FLOOR.

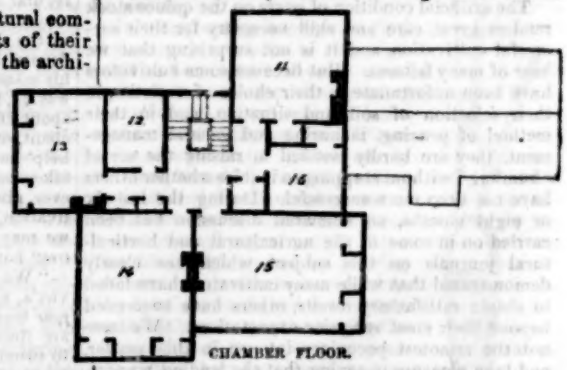
The accompanying design is supposed to be built of wood, in the usual manner of a timber frame, covered with clapboards or mill-worked flooring, and covered with a shingle roof. The chief idea in it is to get as much variety of outline as possible, with as many conveniences and comforts as are needed, at a moderate expense.

FIRST STORY.

1. Entrance porch, with seat, glazed sash, and outer door.
2. Kitchen, 19 by 15, with three closets.
3. Family room, 19 by 15, with closets at the sides of the window, forming a bay on the inside.
4. Parlor, 19 by 15, with a bay window at the end, and two French windows at the side, opening on a veranda.
5. Dining room, 19 by 15, with ample closets. The side windows are shaded by a canopy roof.
6, 7 and 8. Closets.
9. Wash room, or back kitchen.
10. Wood-house or dairy.

SECOND STORY.

The second story contains two large and four smaller chambers, with an abundance of closets.



CHAMBER FLOOR.

11. Bed room, 15 by 13. 12. do. 10 by 8. 13. do. 15 by 10. 14. do. 16 by 15. 15. do. 19 by 15.

The estimated cost of the above is $3,000.

Horticultural Department.

CULTIVATION OF DWARF PEARS.

As a general rule, anything which retards the growth of a tree has a tendency to force it into premature or unnatural fruitfulness. To attain this object, various methods are employed, among them root pruning, and grafting on a slower growing stock. Thus the apple is *dwarfed* and thrown into early fruitfulness by grafting on the slow growing Doucain or Paradise stock, the plum on the myrabolan or sloe, the cherry on the Mahaleb, the apricot on the plum, and the pear on the quince. Trees so "worked," or grafted, are in an exceedingly artificial condition, and require very careful and judicious cultivation. Apples, cherries, plums, apricots, &c., are all cultivated in this country as dwarfs, but to a limited extent only as compared with the pear, which, in its natural condition, is much longer than any other fruit in coming into bearing.

Pear trees budded on quince stocks can be purchased in the nurseries in the spring, planted out in our gardens, and fruited the following summer or autumn. True, it is not advisable to let them bear so early; but the second or third year from planting, the trees, if vigorous, may be allowed to bear considerable fruit, though not full crops. It will be readily seen that dwarf pears are peculiarly adapted to a new country, where this delicious fruit is scarce; and it is not to be wondered at that hundreds, and even thousands, have rushed into their cultivation, without adequate knowledge or experience.

The artificial condition of pears on the quince stock renders great care and skill necessary for their successful cultivation, and it is not surprising that we hear of many failures. But because some cultivators have been unfortunate in their choice of varieties, in their selection of soil and situation, and in their method of pruning, manuring and general management, they are hardly justified in raising the cry of "humbug," without stopping to inquire whether others have not been more successful. During the last six or eight months, an animated discussion has been carried on in some of the agricultural and horticultural journals on this subject, which has clearly demonstrated that while many cultivators have failed to obtain satisfactory results, others have succeeded beyond their most sanguine expectations. We have not the remotest pecuniary interest in this matter, and take pleasure in saying that the leading nurserymen in this city who advocate the extensive cultivation of dwarf pears, are sustained in their position by the fine crops which they annually obtain from their extensive orchards of specimen dwarf pear trees. No one can walk through the grounds of Messrs. Ellwanger & Barry, H. E. Hooker & Co., and other skillful and intelligent nurserymen, without being satisfied that dwarf pear trees are not only eminently ornamental, but that their judicious cultivation is a source of great pleasure and profit. We may also add that the profitable cultivation of dwarf pears in this vicinity is not confined to nurserymen; there are amateur cultivators who have been equally successful, and who are annually increasing the number of their dwarf pear trees.

A short time ago, Mr. Wm. Stoms read a paper before the Cincinnati Horticultural Society, in which he strongly condemned dwarf pears, and alluded to some remarks made at the last meeting of the American Pomological Society in this city, by the President, Hon. M. P. Wilder, of Boston. Among other things, Mr. Stoms says:

"When the friends of dwarf pear culture shall come forward, and, with 'bill of particulars,' show me an orchard of five hundred dwarf pear trees that have been ten years planted, which have borne fruit *successfully* and *paid cost*, I will give up the contest."

After alluding to his own orchards, which are very extensive, and contain many hundreds (and we believe *thousands*) of pear trees on quince stocks, some of which are thirty years old, Mr. Wilder in reply to the above, says:

"Now we cannot carry our orchards to Ohio, but if friend Stoms will take the cars next August for Boston, and advise me of the time and at what depot he will arrive, I will have a carriage in readiness, take him to my house, have a good chat with him in the evening on pomology, give him the best bed and board we have, and in the morning he shall see my pear trees and the memoranda of my sales of fruit for the past few years.

"I will then take him to my neighbor Austin's, the treasurer of the Massachusetts horticultural society, who has *five hundred and ten pear trees*. All these are on the quince root, with the exception of one or two dozens which are on the pear root; but as these latter have borne but little fruit, Mr. S. will not object to their being counted in the lot. These trees are from eleven to thirteen years of age. One hundred of them are Louise bonne de Jerseys. These trees commenced bearing about three years after planting, have borne regular and abundant crops ever since, and are now in a very vigorous and healthy condition. No account of the crops was kept until the year 1851, but Mr. Austin has kindly furnished me with the amount of his sales since that date. The total sales for six years, was $3,108.76. The original cost of these trees was about fifty cents each, or $250. Mr. Austin is a merchant, and goes to the city every day, and the only help he has had, is the service of a man who also takes care of his stables and grounds. He has, however, given them his personal attention, and good cultivation, but I think, without further estimate of '*cost*,' we may reasonably conclude that these '*five hundred trees*' have '*borne successfully, and paid cost.*'

"We will then take a ride over to the Messrs. Hovey's, where we shall find a much larger number of *pear trees, on the quince root*. Their beautiful avenues are lined with them, some of which are from fifteen to twenty years of age, but as it will occupy perhaps too much time to examine all of them, we will take one walk as an example. How delighted Mr. S. must be to see 220 pear trees, 110 on each side, loaded with their luscious fruit, only eight or nine years planted, and all independently on the quince root. The pro-

duct of those trees in 1855, was twenty barrels. The highest price obtained was twenty dollars per barrel, the lowest eight dollars. Then we can call on Mr. STICKNEY, and look at his *'dwarf'* pear trees. We shall see some magnificent specimens of Urbanistes and Louise bonne de Jerseys. The crop of the latter he sold the last season at ten dollars per bushel. Then we will go to Mr. MANNING'S, who has some pear trees on the quince of very large size, being from thirty to forty years old, and which 'still live,' and produce annual crops. Then we will pursue our journey and call on Mr. CABOT, the President of the Mass. Horticultural Society, Messrs BACON, DOWNER, RICHARDSON, JOHNSON, and others who have splendid collections of *'dwarf'* pear trees, which have been *'planted ten years.'"*

Our space forbids further quotations from Mr. WILDER'S interesting letter; but the above is sufficient to prove that dwarf pears are no "humbug."

GARDEN SEEDS SHOULD BE SOWN IN DRILLS

WHEN a boy, we have spent many long, weary hours in the back-breaking labor of weeding the onion and carrot beds, which, because it required less time, were sown broadcast. We cannot help thinking now, that had the man who prepared the beds and sowed the seed been obliged to do the weeding, he would soon have discovered that the little extra labor required to sow the seed in drills was amply attoned for by the ease with which, as compared with the thumb and finger process, weeds could be destroyed by the hoe. Nearly all garden crops, when sown in drills sufficiently wide to admit the use of the hoe, are not only more easily kept clean, but the constant stirring of the soil in hoeing is found to be exceedingly beneficial. On soils that are not too sandy, the constant use of the hoe is a great means of alleviating the injurious effects of drouth. It also keeps the ground loose, so that the plants can throw out abundance of roots, and at the same time the decomposition of the organic matter and the disintegration of the mineral matter of the soil are accelerated, and it is found that though there are fewer plants on a given space, they are more than enough larger to make up for this deficiency.

Where a considerable breadth of land is sown with carrots, onions, and similar crops, it is advisable to use a drill, but in ordinary gardens, where only a few beds of these crops are sown, its use is not desirable. Drills made lengthwise of the beds present the best appearance, but it is not so convenient to hoe them as when the drills are made across the beds. The beds, too, may be made wider, say five to six feet, in the latter case, than when the drills run lengthwise of the beds. Various contrivances have been employed to economise time in making the drills. The drill-rake, shown in the annexed engraving, is one of the simplest and most efficient. It is constructed of a headpiece of wood, into which broad, flat wooden teeth are set, tapering towards the points, and at such distance apart as the drills are to be drawn. Sometimes the head is in two flat pieces, to admit of the teeth being set at different distances. The pieces are screwed together at each end; or if more than three drills are to be drawn at once, a third screw is placed in the middle. The first drill should be made by a line; afterwards the drill-tooth on the right hand side should be run in the last drill formed. This will keep the drills straight and equi-distant. Be very careful not to make the drills too deep. This is a very common error. For onions, carrots, &c., from half an inch to an inch is quite deep enough.

DRILL-RAKE.

TRANSPLANTING GARDEN VEGETABLES.

Nearly all our culinary esculents can be transplated with impunity. Some plants, such as cabbage, cauliflowers, celery, &c., are amazingly improved by transplanting from the seed-bed once or twice before their final planting out. It increases the formation of extra roots, and renders the plant more "stocky." It frequently enables the cultivator to detect the club or "finger and toes," and also affords opportunity for throwing out mal-formed plants. Onions admit of it with impunity; leeks with singular advantage. The former, however, should not be transplanted too deep or they have a tendency to run to top. Lettuce admits of it freely, and the plants, being deprived of part of their tap-root, throw out a great number of lateral roots, in consequence of which the production of radical leaves is encouraged, and the tendency to run to flower is retarded; while a more succulent growth is induced, owing to the plants being placed in newly prepared soil.

FIG. 1.

In transplanting it is desirable to preserve as many of the small roots or spongioles as possible, and the more so when the operation is to be carried out without checking the growth or vigor of the plant, as in transplanting lettuces at any age. In removing any young plants from the seed-bed to the nursery plantation, the ground should be well watered if dry; and instead of pulling up the tender plants as is usually done, the ground should be loosened with a transplanting fork, similar to the one shown in the accompanying cut, (fig. 1.) It is also of great use in facilitating their removal from the nursery bed to their final place of planting.

In transplanting large plants from the nursery rows, it is very desirable to have a ball of earth round their roots, and for this purpose a semi-circle trowel will be found useful, if not indispensable. Where a large number of plants are to be transplanted, the operation may be facilitiated by the employment of some such an instrument as figured in the annexed engraving, (fig. 2.)—The blades are opened by pressing the lever *a* towards the handle when they open outwards, and in this state are thrust into the ground, having the plant within them; a counter pressure causes them to collapse, and to embrace the ball firmly, and in this state, the transplanter being drawn upwards brings with it the plant and ball entire. It is then taken to its new site and set in its place, when

FIG. 2.

the lever *a* is again pressed inwards, and the blades open and are withdrawn, leaving the plant and its ball entire, to be filled around with earth, and the operation is repeated on another subject. In this way large plants can be transplanted with great ease, and without retarding their growth.

HORTICULTURAL OPERATIONS FOR APRIL.

Attend to the hot beds. See that the heat is kept up well. If it should decline too much, as it most likely will, apply a good lining of hot manure as recommended last month. A good way of doing this is to prepare the manure as advised for the hot-bed, and apply a lining at the back and one end of the bed one week, and at the front and other end the next week; by this means a regular warmth will be kept up. As the cucumber vines advance in length, all the strong and fruitful branches should be trained out at distances of twelve or fifteen inches from each other so as to cover all the space in the bed. To keep them in their places they must be pegged down with little hooked sticks. All the small and fruitless branches must be cut away. As soon as the first young fruit is set and beginning to swell, the end of the vine should be pinched out two leaves above the fruit. By the time this first fruit is ready to cut the vine will have pushed a second time and another young fruit will be set, and will commence to grow as the other is removed. If it be desired to have fine, long and straight fruit, it will not be advisable to leave more than one fruit upon a vine at the same time and that should be laid into a small box about two inches wide and eighteen or twenty long, to keep it straight. I have a variety that I have, by this means, frequently grown two feet in length, and sweet, tender and crisp to the very stalk.

Towards the end of the month, the seeds sown in boxes on the hot-bed, as tomatoes, purple egg-plant, celery, peppers, &c., will have grown large enough to require pricking out, and where there are not proper hot-bed frames and sashes, a substitute may be made in this way: In some rather elevated and dry spot, dig out a trench eighteen inches deep and five feet wide and of sufficient length to take the required number of plants, then drive down a post at each corner and place some boards all around on the brow of the pit and bank the earth up to the boards on the outside. Now fill the pit full of hot manure, as high up as the bottom of the boards, well mixing it, and beat it down firmly with the back of the fork. Cover the manure with four or five inches of the best garden soil that can be had; rake it soomth and press it down gently with the back of the rake; cover it over with some old boards or mats to keep cold wind and wet off, and in a few days it will be nicely warmed through. The best way of transplanting or pricking out, will be to take the plants separately between the fore finger and thumb of the left hand, and with a common dinner fork in the right hand gently lift the plant up without breaking the roots, then, with the fore finger of the right hand, or with a dibble about the same size, make a hole in the new bed and place a plant in about up to its seed-leaves without breaking it and press the earth gently down about its roots. Plant the rest, or as many as are wanted of each kind, in the same way about four inches apart; when done give a gentle watering with water of the temperature of about 60°. This planting should be done in mild, dull weather, to avoid drying the roots. Shade a little at first in sunny weather, and cover up in cold or wet weather, and at night.

Seeds of Hardy Vegetables in open Ground.—If the weather be favorable in the first or second week in the month, select a warm sheltered spot: manure and dig it well, and if the soil be mellow rake it finely. Lay it out in beds five feet wide with alleys two feet wide between. One bed may be sown with early cabbage lettuce, one with scarlet short-top radish, one with early short-horn carrot, one with onions, and a small patch of early June potatoes. It is a little more trouble to sow these seeds in drills, but it is a great deal the best way. For lettuce, strike a line the length of the bed and six inches from the edge, then make a drill half an inch deep, with a stick; make these drills six inches apart; sow the seeds thinly in the drills, and just cover them by pulling the earth from the edge of the drill over them with the back of the rake, and press it gently upon the seeds. When up, thin out to four inches apart; and as they get fit for use pull every other one, leaving the main crop eight inches apart. The radish seed can be sown in drills in the same way, but buried a little deeper, say half an inch; four inches apart for the radish drills will be sufficient. When they have made the two first rough leaves it will be seen which will bulb and which will not; pull out those that will not bulb, leaving the others two inches apart; the thinnings will make very nice salad. The onion seed may be sown in the same manner as the radishes, and if to be used small for salad, the drills may be made six inches apart, but if any are to remain to come to maturity, they must be made twelve inches apart, and the onions thinned to four inches apart in the rows. Early short-horn carrot may be sown in drills twelve inches apart, and to the same depth as the radish. If the weather should be windy at time of sowing, it will be well to rub the seed with a little damp sand; this will prevent it from being blown away and will facilitate the work a great deal. When the carrots are two inches high thin out to two inches apart, and as they grow large enough for use, say half an inch in diameter, at which time they will be sweetest, pull out the largest for use, and leave the small ones to grow larger. Plant a few early June potatoes in rows two feet apart, and one foot apart in the rows; plant with a large dibble so as to cover the sets four inches deep. All these may be sown, if the weather be favorable and the frost out of the ground, first week in April; but there will be nothing gained by sowing while the ground is wet and cold. A good place for these first seeds will be a rather elevated border, sloping a little to the south, and on the south side of a board fence, or sheltered by some buildings. Protect them by covering the beds at night with a little light litter, and pull it off during the day, until they have got large enough to be in danger of being pulled out by the litter.

Some Early York or Early Winningstadt cabbage may be sown on a gentle hot-bed, also Early Paris cauliflower.

Choose the richest and best piece of ground you have got for some early peas. I am aware that many writers recommend rather poor ground for peas, but I have always used the richest and deepest that I could command, and always with the best results. On poor ground they are apt to mildew when the crop is about in its best condition, if the weather should

prove hot and dry; but in deep, rich ground never. Plant the rows five or six feet apart, this will leave room for the celery trenches between them; which will be planted before the peas are cleared away.

If some old barrels, with the heads knocked out, be placed over some of the rhubarb plants and the barrels banked round with warm manure, about two feet thick; the rhubarb will be fit for use a week or two before that in the open ground without protection, and much nicer. The barrel should be covered every night with old mats or boards, and uncovered in warm days.

Asparagus beds should be lightly forked up and dressed with a little rotten manure. Raspberry canes should be taken out of their winter covering, tied to stakes and the strongest cut to four and the weakest to two or three feet in length. JOSIAH SALTER.

FLOWERS FOR SPRING SOWING.

In this climate where late springs, and hot, dry, summers so ofter occur, recourse is generally had to annuals for the adornment of gardens, on which, indeed, in a great measure we depend for flowers during the summer months, but so little judgment is shown in the selection of kinds, oftimes through lack of forethought, but generally through an imperfect knowledge of what is being planted, that I have thought, at this time, that a short sketch of a few of the best annuals, &c., would not be unwelcome to your readers, especially the lady portion of them.

The double balsam is one of those annuals, which, when well grown, is one of the most beautiful productions of Flora, and yet how seldom do we see it entering into the composition of the flower garden, and when there, is seldom more than semi-double, and oftener single. Now, it costs no more to raise good plants, than it does to grow poor ones, and we should no longer have such a thing as a single balsam in the garden. Procure your seed of reliable persons, and if it *does* cost sixpence more than you can get it for elsewhere, do not hesitate to pay it and take out the pay afterward in satisfaction at having good flowers, and in laughing at your neighbors who would not buy good seed and got cheated. The balsam, to do well requires a warm, moist spot, and should never be allowed to flower where the seed was sown. The plants should be raised in the house, or in a warm spot in the garden, and when about three inches high, transplanted to the place where they are to bloom. It requires rich soil and liberal treatment, and cannot brook starvation. The colors are scarlet, crimson, purple, white, yellow and mottled. The plants should never be grown nearer than two feet apart. Sow seed 1st to middle of May.

The China aster is the greatest ornament to our flower gardens in the autumn, that can be well grown; like the balsam, the plants should be raised early and when about two inches high be transplanted where they are to flower. They may be grown in rows or in masses, and the plants should be about eighteen inches apart. Colors—crimson, red, pink, white, blue and purple, and variegated, all the above colors in different varieties, being mixed with white. Should be grown in good soil.

The Drummond phlox, is an annual, unrivalled by any other for beauty and diversity of color, and should be grown in masses, by which method it becomes very effective. The seed should be sown about the 2nd week in May, where it is to flower, in a warm, sunny spot, and in dry weather it should be carefully watered.

The centaurea too, is but seldom grown, although deserving of attention from the unique shape of the flowers, they being of all shades of blue, purple and crimson and sometimes white. Plant seed same time as Phlox Drummondii.

Mimulus cardinalis, or cardinal monkey flower, should be in every good garden. The seed is very minute and should be planted early, in a well prepared bed, and shaded from the bright sun till the plants are up.

The Marvel of Peru, or four o'clock, is a large spreading tuberous rooted annual, well known, but not sufficiently planted. The plants should be grown about three feet apart in a warm sunny spot. The improved varieties are beautifully striped pink and white, purple and white, and orange and crimson.

Candytuft should be in every garden, especially the tall white and purple sorts, which are fine for growing in masses.

The sweet pea is useful for hiding fences or bare spots, the flowers being not only extremely gay, but also very fragrant. It also looks well planted in circles, with a large branch or other support for them to cling to.

Nemophila, insignis and maculata, are very delicate and pretty, and useful for sowing in shady places where other things will not thrive.

Portulacca is indispensable for growing in hot, dry places, for no sun can be too hot, or weather too dry for it. Colors—scarlet, crimson, yellow and white. Plant seed about the middle of May, in clumps or masses.

The petunia, although a perenial, blooms the first season from seed, and makes one of the most showy flower beds imaginable, the flowers being large, and varying in color from dark crimson to white.

The double flowered china pink, is also worthy of general attention, the flowers being beautifully variegated and the colors extremely gay.

All the foregoing, with a few others for winter ornaments, such as Gnaphalium, Xeranthemum, Amaranthus, &c., together with a well chosen collection of perennials, if well grown will make a display through the whole season that will be hard to beat, and will require but little attention other than keeping clear of weeds and watering carefully during dry weather.

Rochester, N. Y. W. T. GOLDSMITH.

BIRDS—THEIR USEFULNESS, &c.

It is a well known fact that the alarming increase of insects and worms in making ravages upon our fruit trees and fruit, not only paralizes the efforts, and dishearten the hopes of the cultivator, but threatens total destruction to many of the most delicious fruits. So extensive are their ravages, that but very few of our apricots and plums ripen without premature decay from the worm generated by the beetles which surround our trees in the twilight of the evening, in great numbers, when the fruit is quite young. And when the produce of our apple, pear, or peach trees is small, but few of these escape the same fate.

The birds are to the farmer and gardener of great value. They were designed by the Creator to check the too great increase of insects, and no farmer should suffer them to be wantonly destroyed on his premises.

The number of insects, worms and larvæ, destroyed by the robin, cat bird, swallow, sparrow, wren and other small birds, is astonishing. One little family of sparrows will destroy several hundred insects in a single day.

The most casual observer could not help to observe that the various tribes of insects have increased in proportion to the decrease of birds, who are their natural enemies; the equilibrium of nature has been disturbed by our cruelty and ignorance, in refusing protection and succor to our best friends, and the annual loss sustained by the country would be difficult to estimate. Wheat, Indian corn, garden vegetable, fruit trees, and even the grass, and the trees of our forests, annually furnish conclusive evidence of the great disturbance in the equilibrium of nature produced by those cruel, ignorant, loafing savages, and even boys, who may be seen skulking and creeping round the fences with an old rusty musket or fowling piece, killing without discrimination, every bird they see. It is a mean and contemptible business, to say the least, to destroy the little songsters that render the fields vocal, and beautify creation.

During the past fifty years the various tribes have been diminishing with a frightful rapidity, and if it should progress in the same ratio for the next fifty years, it will be a serious question whether the produce of the country can be kept up so as to supply the wants of the inhabitants.

Where is the farmer that followed the plow fifty years ago, that does not remember the flocks of birds that crowded the furrows of the newly turned up earth, devouring every grub and worm that was exposed to the surface? They seemed to be fearless of man, each one appearing anxious to be nearest to the foot of the plowman to destroy his inveterate and insidious enemies. Now what has become of those faithful guardians of our property? The answer to this question can be given by every farmer in the country. As soon as they begin to make their nests in the spring, a set of idle, miscreant boys commence annoying them, take their eggs, and often destroy their nests; and at all seasons of the year a set of ruthless vagabonds prowl through every neighborhood, with their guns, ever ready to shoot down a robin, cat bird, sparrow, and even the diminutive, harmless wren, either of which are rendering more service to community, in proportion to their ability, than their numerous persecutors.

In addition to the important usefulness of these birds, their musical notes in the twilight of the morning, are peculiarly delightful; awaking the farmer to the sublime contemplation and enjoyment of all the infinite beauties of creation. What is more pleasing to a lover of nature, than to rise at the dawn of day in the month of May or June, and when sallying forth, to be greeted and cheered with the lively notes of the sparrow, the melodious song of the robin, and the musical and queer notes of the bobolink?

Birds are the best of entomologists. No ornithologist ever hunted specimen birds with the industry and perseverance exhibited by birds themselves in their researches. "They desport in the air," says a writer, "penetrate every nook and corner of thicket, hedge and shrubbery; they search the bark, pierce the dead wood, glean the surface of the soil, watch for the spade trench, and follow the plowman after worms and larvæ. A single bird in one season destroys millions of insects for its own food and for that of its own nest. No computation can be made of the insects which birds can devour. We cannot think of another theme more inspiriting than the plowing season in this respect. You will find bluebirds in the tops of trees, practicing the scale; crows are cawing as they lazily swing through the air toward their companions in the tops of distant dead and dry trees; robins and blackbirds are wide awake, searching every clod that the plow turns, and venturesome almost to the farmer's heels."

Birds are also the best of scavengers, the nimblest hunters, and adroit butchers. They have no Grahamite scruples to agitate this worm and bug-loving tribe. They do not show their teeth to prove that they were designed for meat. They eat what they like, wipe their mouth on a limb, return thanks in a song, and wing their way to a quiet nook, to doze or meditate, snug from the hawk that sails about in the air above. To be sure, birds like men, have a relish for variety.

Birds are likewise, the best of pomologists. We charge every man and boy with positive cruelty and dishonesty, who drives the birds from the garden in fruit time. Does not the fruit belong to them as well as you? Did they not watch and take care of it as well as you? If they had not eaten egg, worm and bug, your fruit would have been pierced and ruined. Besides, on investigation it has been discovered that they never disturb sound cherries, and none but those that have worms in them. We say *protect and spare the birds*, and they will destroy millions of your greatest and worst enemies—the insects.

"There is scarcely a farm in England," says a writer, "without its rookery; the humid atmosphere multiplies every species of insect, and those birds reward man for his forbearance and protection, by ridding him of legions of his foes."

Treat the birds kindly and they will become almost domesticated—follow the plowman, and pick up all the grubs and worms turned up from their subterranean abode. For doing so they deserve well of the farmer, and no honest man will cheat them out of their part of the crop—much less kill them for trying to get it. We repeat again, *spare the birds.*

In vain will be all our labor and toil; in vain the united efforts of the horticultural societies for increasing and perfecting the cultivation of the most delicious varieties of fruit, unless we can *increase* or at least *cease* to diminish these useful and melodious birds.

We would appeal to the self-interest of the owners and cultivators of land. They must surely be ignorant of the injury which is in progress when they allow it to go on unreproved before their eyes. We would also appeal to their own selfishness and love of gain, if no higher motive will reach them, and entreat them, as their influence gives them opportunity, to lend themselves to a work, the first consequence of which will be their own welfare; the second, the welfare of their country. They are supreme, each one over their own territory, be it large or small. Let them resist and punish every trespass of the wanton slaughterers of birds: let them declare war against the whole tribe of truant murderers, whose daily sport is the spoiling of the nest, the invention of new, and the use of their old and destructive snares, and the more immediate devastations of the gun. Let our sturdy farmers hold themselves forth as steadfast resisters of every such act, and particularly of every encroachment for this purpose, upon the lands for which,

as stewards of our country's prosperity they are more immediately responsible; let them do this work with all their might, and again we say, we look not beyond them for ultimate success. We are not, however, over sanguine of success of any or all these schemes and appeals; we look high for the source of assistance and remedial action, to which we think the way lies clear.

We look then to legislative enactment for our remedy. It protects the birds in our cemeteries, and game for sportsmen, who disregard all fear of trespass in its pursuit. In many States it offers large rewards for the destruction of the noxious birds, whose numbers are small, but whose paid destruction is of evident injury to the farmer. Those who take advantage of the bounty offered, being usually low miscreants, who care no more for the laws of property than for the lives of the myriads of serviceable birds which fall in common with the proscribed species.—We look to legislative power for the uprooting and extermination of this evil. Let stringent and summary laws be enacted, inflicting fines and penalties. Let the power be put into the hands of the farmers to arrest any person found on their premises with a gun and birds in their possession; aye, let them have the power to take the gun from them as security for the fine or penalty.

With half the ingenuity which is yearly expended upon more favorite enactments, the power of offended government might be readily brought to bear upon offenders, by a well contrived system of rewards to discovery and prevention, and punishments for transgression. This, united with and enforced by the labors of possessors of the soil, and trainers of the young, would soon be effectual in the attainment of our object.

In concluding these remarks, we hope to be pardoned for again reiterating the importance of the subject. The injury done by insects is often unseen and unknown, but enormous; the number of their destroyers is fast decreasing, and can never be renewed; without them we are helpless, and agriculture deprived of servants and services which can not be replaced. BEMENT.

Rochester, N. Y.

FRUIT GROWING IN OREGON.

MESSRS EDITORS:—I have over one thousand fruit trees of various kinds, some of which are in bearing and promise well, being the result of my own labor of three years residence in this territory. Having a somewhat elevated situation of 800 feet above the level of the Wallamett at Salem, and 1000 feet above the level of the sea, surrounded by a valley from ten to thirty miles wide, and from six to nine hundred feet below the highest part of my plantation. Soil red clay loam; subsoil a redish clay.

As I have been a careful observer of all matters pertaining to horticulture in this territory, it may not be amiss for me to state a few things for the benefit of my fellow horticulturists. Apples, pears, plums, cherries and apricots, have already shown themselves capable of profitable cultivation; peaches, grapes, nectarines and gooseberries, furnish an ambiguous result thus far, with an occasional promise of success.

Of apples we have over 150 varieties in cultivation, the greater portion of which are well known to you; but there are a few varieties highly approved with you that are nearly worthless here, among which I will name the Sweet Bough, while there are others that are second rate with you that are first quality with us, among which are the white winter Pearmain and the Wine Sap, the latter, as I am informed, sold last winter for ten cents more on the pound in San Francisco, than any other variety.

The mildew is almost the only enemy that the apple has in this country. Pears are universally productive, and the fruit large and high flavored, and it is quite likely that the quince, as a stock, will be entirely dispensed with here, as our trees on pear stock bear quite young, and the long dry season perfects the flavor of the fruit, equaling that grown on the quince.

Plums, like the pear, are very productive, large and delicious, and have no enemies. Curculio and black knot are not known here. Apricots are hardy and productive, promising well. Cherries come up to our best expectations, except the occasional death of a tree, which we attribute to the use of wild stocks.

Peaches are very uncertain, owing to the curl in the leaf; more than two-thirds of the peach trees in the Wallamett valley suffer every season with this malady, and present to the eye of the beholder, in the month of June, a desolate appearance, destroying the hope of the cultivator almost entirely; but those varieties that escape, produce fine fruit. It is difficult to say what is the cause of this disease or to suggest a remedy. When the *Genesee Farmer* came to hand, in which a correspondent gave his experience in nailing the trunks of his trees, I predicted at once that in less than two week, there would be more than 500 pounds of nails used in Oregon in nailing up peach trees, and immediately nailed some myself to try the experiment, but with a very small degree of success. WM. RUBLE.

Cincinnati, Polk Co., Oregon Ty.

MAKING AN OSAGE ORANGE HEDGE.

EDITORS GENESEE FARMER:—The osage orange grows spontaneously on the Osage River, in Missouri and Kansas, where it forms a small tree, growing to the height of twenty-five feet. I have seen it flourishing north of forty-three degrees of latitude; still it is rather tender while young, and liable to kill more or less the first winter; and as it is a thrifty grower, the ends of the branches are often nipped by the extreme cold; yet the bodies of the plants came safely through the frosty ordeal last winter, and they are not likely to have a tougher time of it soon.

PREPARING AND SOWING THE SEED.—The seeds are rather hard to start. The best way is to mix them with earth in the fall, and put them where they will keep frozen through the winter; or if kept dry until spring, pour hot water on them, and let them stand in a warm place two or three days; then mix them with wet sand, and keep warm. Do not fear spoiling them with hot water; if you do not scald them they will not sprout. After they have begun to sprout pretty freely they may be planted, which should be done in April.

PREPARING THE SEED-BED.—The osage orange is a lover of good living; so in preparing either the seed bed or the hedge row, never fear of getting the soil too rich. Some prefer planting in a bed and transplanting to the hedge row the next year, while

others sow the seed where they want the fence. I have tried both ways, and like the last best if the ground is well prepared and not disposed to be weedy; otherwise it is better to sow the seed in a bed, and transplant when the plants are one year old.

Setting out the Plants.—Make the ground rich and mellow, and plow a furrow where the hedge is to be set. Then, when you are ready to transplant, take a scythe and mow off the tops of the plants in the seed-bed about two inches above the ground; then run a sharp plow under the rows, cutting the plants off about eight inches under ground, place them in something convenient to carry them in, and set them six inches apart in the furrow you plowed where the hedge is to be, and draw the dirt around each plant with a hoe, making it firm with the foot.

Training the Hedge.—The fall following, mow off the sprouts to within two or three inches of the place where they were first cut, and cover the ground with coarse manure or straw before cold weather sets in. In the spring this must be cleared off. Keep the weeds out, and, about the tenth of July, cut the plants down to within four or five inches of the last cutting. Cut again in the fall, and so on from time to time. If you have taken pains to fill in with fresh plants where any have died, in four years time the orange will make an impregnable fence. L.

Lynn, Pa.

"MY NEW GARDEN."

The "mid-winter thaw," which came in February, gave me another look at my new garden, and almost made me impatient for spring so that I could work in it again. I took so much pleasure there last season, that I have a mind to tell your readers about it—perhaps it may incite others to seek happiness in the same innocent manner. I must say, however, that it is not much of a garden yet—as only last spring it was a part of an old meadow—an unoccupied corner of the orchard lot—very conveniently situated for my purpose. The soil is a sandy loam, dry, and full of small stone, which will make plenty of work for the hoe and rake for several years to come. I don't like a stony garden—but I like such a soil as we always find with stone, better than any other; and *work* will clear them away in time, as they are turned up in plowing, spading, and raking the ground.

As to *fencing*, my garden fronts on the road, and lies east of the front door-yard, so I had fence to make only on two sides of it. This, temporarily, I constructed of "picked up" rails about eleven feet long with every other length of five and a half feet rails. The later were culled from several loads of broken rails, drawn up for wood, and sawed into regular lengths before using. Such a fence occupies only about four feet in width, and with a rider staked across the centre of each long length, would stand quite a heavy wind or push from an animal. Mine has stood without this "finishing touch" so far, except when thrown down last fall by some unruly horses.

The plat was *plowed* early in May, was well harrowed immediately, and pretty fine tilth established, considering the depth of the plowing (seven inches) and the toughness of the sod. No manure was applied, as I wished to get an idea of the present capacity of the soil, and intended hill-manuring and top-dressing most of my crops with stimulating fertilizers.

The first object being to get the ground clear of sods and in fine tilth, I *planted* the greater part to *potatoes*, May 6th and 10th, putting in seven varieties. On the last named day, I also planted a few hills of *corn*, and on the 21st some fifty hills of *Lima beans*, with a small handful of ashes and bones, (which had lain together some weeks,) mixed with the dirt over each. I found I missed it in not taking pains to place each bean with the *eye down*, as those thus placed come up more readily and surely. Such large beans cannot turn easily in a compact soil, and the shoot often breaks and rots before getting to the surface. I also planted French dwarf beans, some fifty hills, but without any special application. On the 24th, I planted a few hills of sweet potato, and Boston marrow *squashes*, in opposite corners of my garden.

The *cultivation* consisted simply in keeping the soil mellow and the weeds down with cultivator and hand hoe. The corn and Lima beans were hoed most frequently. The corn was top-dressed with ashes, also the potatoes,—the later also received an application of gypsum. The squashes were watered with soap-suds occasionally. As to *weeds*—pigeon grass, pig-weed, parsley, and the wild bean, were the most troublesome—the parsley is the most difficult to eradicate.

In regard to the *crops*, they were very satisfactory. It is a pleasant thing to eat the fruit of one's labor. First, we had string and shell-beans from the dwarfs, and then the delicate Limas, so delicious I can almost taste them as I write. These lasted a long time, at least two months, and until hard frosts come. We had also new potatoes, green corn, not forgetting a few radishes, which grew where some hills of the Limas were missing. And in the fall we had fine potatoes, also fair squashes—though these did not do very well on account of the drouth.

The present year will give quite an addition to my garden products. I made a nice *strawberry* bed last August, digging up the ground some eighteen or twenty inches deep, and planting four of our best varieties. They rooted finely, and I hope will come out in the spring, ready to give many a dish of strawberries next June, and some seasons thereafter. I have also made a *pie-plant* bed, digging it up two feet deep, and putting in plenty of manure, setting out my roots in October. I shall prepare for *asparagus* next season, and devote considerable attention to other usual garden vegetables. The manure is already on the ground for my onions and other beds and my vine patch, and I shall have more drawn out before plowing. But I must not make a long story of my plans and projects, but will give you some account of them perhaps after putting them into execution.

A Country Invalid.

The Cabbage was highly esteemed by the ancients. Phillips tells us that the ancient Romans, *having banished physicians out of their territories*, preserved their health for six hundred years, and soothed their infirmities by the use of this vegetable alone.

A light, rich soil, abounding in vegetable mould, produces the *earliest* peas; but a strong loam, inclining to clay, yields the *largest* crop.

Ladies' Department.

ORIGINAL DOMESTIC RECEIPTS.

Bread No. 1.—To Make Three Loaves.—At night add to three quarts of sifted flour one table-spoonful of salt, two quarts of sweet milk scalding hot; stir to a batter; when milk warm add one cup of good hop yeast, or less if brewer's; in the morning early, mould thoroughly with flour, not stiff; stand till well cracked open in the pans; bake one hour.

Bread No. 2.—At noon, boil and mash six or eight potatoes, turn over them nearly one quart of boiling water, half pint flour, one table-spoonful of salt, and one of sugar; when milk warm add one cup of good yeast; at night stir this with one quart of warm water to two and a half quarts of flour; mould in the morning as above.

Soda Cracker Pudding.—To one quart of warm milk add three pulverized crackers, three eggs, salt-spoonful of salt, (or four crackers and two eggs;) spice to your taste; bake thirty minutes; served with sugar and butter.

Oyster Soup.—Two quarts of water, one of milk, one table-spoonful of salt, two full spoons of flour stirred in a little cold water and add when boiling; then add two quarts of oysters; when boiling turn it over six or eight pulverized crackers, with half cup of butter; pepper to your taste.

To Pickle Ripe Cucumbers.—Pair the cucumbers and take out the seeds; turn over them a weak brine; let them stand twenty-four hours; rinse them; then turn boiling alum water over them; cover with cabbage and peach leaves and let them stand till cold; slice them; to two quarts of vinegar add one pound of sugar, and cloves, cinnamon and ginger root to your taste. Turn the vinegar over hot.

Preserved Pumpkin.—Cut a good pumpkin in strips like citron; sprinkle sugar on them over night, pound for pound, and the juice of four lemons, in the morning; boil the peel and a little ginger root, and add to the syrup. Boil the pumpkin till tender, then turn on the syrup boiling hot.

Soda Cake without Eggs or Butter.—Three cups of flour, one and a half of sugar, two small tea-spoonsful of cream of tartar, one tea-spoonful of salt, one cup of cream—all added to the flour with extract of lemon, one tea-spoonful of soda dissolved in hot water; stir briskly; bake in a quick oven.

Fruit Cake without Eggs.—One cup of molasses, one cup of brown sugar, one cup of butter,—heat together sufficiently to melt the butter; two tea-spoonsful of cloves, two of cinnamon, one of nutmeg, one coffee-cupful of raisins, (with or without currants,) citron; then add one tea-spoonful of soda dissolved in hot water; one cup of sour milk or butter-milk and one quart of flour; bake one hour.

Lemon Pie, No. 1.—Seed and chop one cup of raisins, with one large lemon; pulverize four soda crackers, one cup of sugar, a little salt; stir into one quart of boiling water, a small lump of butter; this quantity will make two pies; bake with upper and under crust.

Lemon Pie, No 2.—To one cup or half a pint of scalding milk add one soda cracker rolled fine; four table-spoonsful of sugar; three or four eggs, a small lump of butter; put in cold milk enough to fill a plate that holds one quart, then add the grated rind of one lemon; bake with under crust.

Good Pumpkin Pie without Eggs.—One quart of boiling milk; two soda or Boston crackers rolled fine, put to the boiling milk; two tea-cups of strained boiled pumpkin; little salt; one cup of sugar; extract of lemon; little ginger. If this quantity will not make two pies put in a little cold milk. Bake in a hot oven.

H. H. M.

Liverpool, N. Y.

Receipt for Rusk.—To one quart of milk add one pound of sugar and half pound of butter; one pint of the milk must be warmed to make a sponge of, with yeast and flour, about as thick as pancake batter, let it rise all night. When risen enough warm the other pint of milk with the sugar and butter, put it into the sponge; knead it, but not very stiff. Let it rise again; when risen enough, mould it into cakes as large as biscuits, place them in tins and let them rise; rub them over with sugar and milk. Bake them in a quick oven. When baked rub them again with sugar and milk to give them a gloss.

Molasses Cookies.—One coffee cup of molasses; half a cup of butter; three tea-spoonsful of soda; one and a half of cream of tartar; flour enough to roll out.

Cracker Pie.—Two soda crackers soaked in one cup of warm water; one small tea spoonful of tartaric acid, or lemon juice; one cup of sugar. Season and bake as an apple pie.

My Wedding Cake.—One pound of flour; one pound of sugar; one pound of butter; two pounds of raisins, stoned; three pounds of currants well washed; one and a quarter ounce of mace; one ounce of nutmeg; one and a quarter pound of citron; half gill of brandy; a few cloves. Bake in large loaves three hours.

Snow Ball Pudding.—Pare and core large, mellow apples, and enclose them separately in a cloth spread with boiled rice; boil them one hour; dip them in cold water before turning out. Serve them with cream sauce.

Crackers.—Four tea-cups of flour; half cup of butter; half tea-spoonful of soda, in a spoonful of boiling water; one pint of milk and water; knead it as hard as dough; roll thin and prick with a fork.

For Preserving Citron.—Soak them in salt water three days; change the water every day. Let them remain in clear water one day, after which boil them in water with oyster shells until tender; take them out and put them in alum water, let them soak one hour. Make syrup, allowing one pound and a quarter of sugar to a pound of citron. Let them boil in the syrup half an hour. The citrons are best kept until the month of February before preserving.

Molasses Pie.—Take nine table-spoonsful of molasses; six table-spoonsful of good vinegar; one and a half table-spoonful of flour; a small piece of butter; a few slices of lemon, or grated lemon-peel; cover with a rich paste. This is decidedly the *best* substitute for apple pie.

J. L.

Westmoreland, Oneida Co., N. Y.

Editor's Table.

MURIATIC ACID IN MANURE HEAPS.—Our opinion has been asked in regard to the value of muriatic acid in "fixing" ammonia in manure heaps. Muriatic acid will convert all the volatile carbonate of ammonia that is already formed in the manure heap into the fixed salt, muriate of ammonia; and, so far, answers the purpose admirably. But there is this objection to its use: *it arrests fermentation.* It will prevent the escape of the ammonia present at the time of its application, but it has a strong tendency to prevent the formation of any more. If it could be spread over the heap in such a way that the ammonia would have to pass through it as it was attempting to escape, free muriatic acid might be useful in fixing the ammonia in manure heaps. But this cannot be done. The acid is brought into direct contact with the mass of the manure, and arrests fermentation, doing, as we think, (and we have had some experience in this matter,) more harm than good.

If muriatic acid can be obtained cheap enough, it might pay to use it for fixing ammonia in manure heaps, by first using it to convert bones into superphosphate of lime, which, saturated with acid, may be scattered over the surface of the heaps. We are not sure, however, that this would be profitable.

PHOSPHATE OF LIME IN GUANO.—"A crop of wheat requires more phosphate of lime than is contained in ten hundred pounds of Peruvian guano.—*Exchange.*

Such assertions as the above are a disgrace to our agricultural literature. The most unscrupulous vender of "phosphatic guano," "improved superphosphate of lime," &c., could not make a statement more utterly at variance with fact; and we are surprised to find the above in the editorial columns of a respectable agricultural paper. A crop of wheat of fifty bushels per acre, straw, chaff, &c., does not contain more than seventy-five pounds of phosphate of lime; while ten hundred pounds of Peruvian guano contains upwards of two hundred pounds of phosphate of lime.

GREAT CHEESE FACTORY.—The Lousville *Courier* tells of a gigantic cheese dairy in operation in Trumbull county, Ohio. The proprietor does not keep all the cows from which his cheese is made, but contracts with all the farmers within eight or ten miles to furnish the curd from their cows at prices which net them a larger amount than if they manufactured it into cheese themselves. He annually pays about 4½ cents a pound for it. He keeps six or eight teams employed in collecting the curd from the neighboring farmers—some two hundred in number. Two rooms are occupied for curing the cheese, capable of holding 350 tons of cheese. In these rooms the services of three men are constantly required. When ready for sale the cheese is principally put up in tin boxes for the Californian and Australian markets. About 200 tons of cheese have been manufactured the past season.

BEES.—Look to your bees at this season; clean off all dead bees and live moths from the board of the hive, and feed any hive that is short of honey. A few days neglect of this may cause the loss of the hive.

PRICE OF LABOR IN ENGLAND AND AMERICA.—I see in your Hints on Spring Work, an observation that the high price of labor renders the general introduction of the system of soiling adopted with such advantage in some parts of England and the Continent, of questionable economy with us. Now, as to the price of labor in England I am not very minutely posted; but, from what information I can get, the expenses of farming in England are higher than they are in this country, for, in addition to the amount paid for hired help, the farmers have heavy rents and taxes to pay besides. Their rent varies from ten shillings to three pounds, English money, per acre, and their taxes are to be paid besides. Now, cannot American farmers afford to hire labor as well as English farmers, when the most of them have no rents to pay at all, and their taxes are very light? and then, too, they have a market nearly as good in many respects as the English. I did not write this article to provoke a controversy, but merely to draw out your views on this subject. I am very strong in the faith that we can farm as well in this country as they do in England, and at as much profit for the labor employed. I hope you will notice this subject as soon as convenient.

Dryden, March, 1857. W. A. FORSYTH.

[We have not time or space this month to give our views on this subject. The amount of rent and taxes paid by English farmers does not affect the question. We pay our hired help in this country about as much again per day as the English farmers. Let us assume that it costs, per annum, three dollars less to feed a cow on the soiling system than in the ordinary way. If the extra labor costs two dollars per cow per annum in England, and four dollars in this country, it is evident that, other things being equal, the English farmer can adopt soiling with more profit than the American farmer. Nay, it is possible, even, that the system will yield the English farmer one dollar per cow profit, and the American farmer one dollar per cow loss.] —EDS.

LIQUID MANURES.—Mr. PORTER, in his report on "The Saving and Application of the Liquid Manure of a Farm," gives the following general result:—"The urine-manure of the farm is easiest managed, and pays best when mixed with the dung; but as there will generally be plenty to do to carry the half of the dung to the fields, we must therefore dispose of the remainder some other way. The next best mode I have found is to mix it with composts, as before described; and this is, doubtless, the preferable plan for all sorts of an inferior description. When compost, however, is difficult to get, and the land of a fair average nature, the urine may then be applied in the liquid form to new grass or corn early in spring, and always in damp rainy weather. By giving a dressing of 2,000 to 3,000 gallons of the diluted liquid, I have sometimes succeeded in increasing the hay crop to nearly double the average quantity; but the nature of the weather affects it so much, and it is so difficult to regulate its application, that I think it better to dispense with the system as far as possible, and to mix the urine with the dung and compost heaps."

THE APRIL PREMIUMS.—Our agents will please bear in mind that the time for competing for our large premiums, expires on the fourteenth of April. The competition is very close, and it should be borne in mind that a single additional name may secure a prize.

Feeding Cows.—A correspondent thinks there has been a good deal of talk in the *Farmer* lately in regard to milking the cows, and very little in regard to feeding them. His practice is as follows: Give them as much hay as they will eat; water them early in the morning; give each cow per day four quarts of carrots, beets, or potatoes, and one quart of Indian corn meal; feed them three times a day; water again at sunset. See that they are properly fastened; curry them, and keep the stables clean, and well littered with straw. The meal adds materially to the quality of the milk, and keeps the cows in a good, healthy condition. Cows cannot be kept profitably on dry fodder, without roots. The lice are sure to find a poor cow; it seems as if they held a heavy mortgage on all half-starved animals, and it is not an unfrequent occurrence for them to *foreclose*

Short-horn Bull "Master Butterfly."—This celebrated animal, winner of the First Prize at the last Fair of the Royal Agricultural Society of England, and at the Universal Exhibition in Paris, and which was sold to Mr. Ware, of Camperdown, Australia, for the unprecedented sum of 1,200 guineas, arrived at his destination in safety, and in good condition. We gave an excellent portrait of Master Butterfly in our last volume, page 280. We chronicle his safe arrival with the more pleasure, from the fact that many fears were entertained that he would not survive the voyage. Indeed, it was rumored sometime ago that he had been thrown overboard a few weeks after leaving England.

"Feeding Cows for Butter—New Views."—We have received an article, under this caption, from a scientific gentleman in Philadelphia. It contains some good ideas, but none of any great importance, we believe, that have not been presented to the readers of the *Genesee Farmer*. Why they should be termed "*new views*," we do not exactly see. They are not new to us, or to any one acquainted with the agricultural literature of the last decade. The results of the experiments referred to as "*recently*" made in England, were given in a book which we read *ten years* ago.

Young Farmers should take the Genesee Farmer.—A friend writes:—"As well might the young student succeed without his dictionary in learning the meaning of words, as those who are in the incipient stages of agriculture or horticulture without the timely aid of a well directed and able periodical, whose *every* page is devoted to enhance the interest, not only of those who cultivate their scores of acres, but the mechanic or professional man who wishes to make the most of his one or two acres. As such, we have welcomed the *Genesee Farmer*, as a timely friend from month to month for the last two years, often feeling the reading of one number amply paid us for the cost of the volume."

To Destroy Weeds.—On some soils, a good method of destroying weeds is to plow, in the fall, as shallow as possible the first time, and then shortly afterwards to plow again quite deep, being careful to bury completely the first furrow. G. G.

[The Michigan double plow would effect the above at one operation.]—Eds.

Lime as a Manure.—A Canadian correspondent writes, that on clayey soil, lime should be applied in the caustic state, on the wheat fallow, about the middle of July, and immediately harrowed in, and the land plowed up into ridges as soon after as possible. Let it lie in this state five or six weeks and then sow the wheat. He finds from experience that lime so applied enriches and mellows clayey land. On sandy soils he thinks lime is best applied "in a mortered state, as it cools the land and it makes it firmer." For pasture or meadow, it is better to compost it with soil and barn-yard manure, than to apply it in the clean state. His opinions are derived from forty years' experience.

Cultivation of Potatoes in Washington Territory.—James F. Hunt, of Laport, Washington Territory, sends us an article on the cultivation of potatoes, from which we make a few extracts. "The cultivation of potatoes requires considerable care; the soil should be thoroughly plowed and manured, and if dry *irrigated*. Plant about the first of May, and when the plants are about four inches high *plow them under*; and when they get out of the ground the second time about four inches high, hoe them thoroughly, and repeat the process three or four times during the summer."

Fall Plowing to Kill Canada Thistles.—H. B. White, of Sterling Village, C. W., writes us that a neighbor of his had a piece of land completely covered with thistles. He plowed up a portion of it in the fall, and a portion in the spring, and sowed both with oats. "That plowed in the spring was all thistles, while on the part plowed in the fall there was scarcely a thistle to be seen." It is supposed that the thistles were killed by the severe cold.

To Secure Male or Female Progeny at Will.—I have seen several articles on this subject lately in the agricultural papers. It is stated that a heifer calf is invariably produced when the cow is put to bull before milking, and a male calf if put to bull immediately after she has been thoroughly milked. What do you think of it?

A Constant Reader.

[We think it is all nonsense.—Eds.]

Pink-Fleshed Apple.—H. F. Delany, of Valley Forge, Pulaski Co., Ill., writes that he has an apple tree in his orchard which produces fruit of "a pale yellow on the outside, but when cut open is of a beautiful bright pink, and some quite red. It is an early autumn apple, very good for eating, but does not cook well. It is quite a curiosity in this part of the world."

Chester White Pigs.—In our allusion to the beautiful "Chester White" pigs exhibited by Mr. Thomas Wood, at the Fair of the United States Agricultural Society last fall, we made a mistake in the post-office address of Mr. Wood, which is Penningtonville, or Steeleville, Chester Co., Pa., instead of Remington.

Lice on Calves.—A correspondent writes that he finds nothing so good for killing lice on calves as a strong decoction of tobacco—say about half a pound to each calf. Wash the calves all over with it once, and again, if need be, after two weeks.

DRYING FRUIT.—Our method of drying fruit is to take four sticks, three and a half feet long, halved together at the ends and pinned; then take black ash splints and weave on basket fashion, leaving half an inch between each splint; this we lay on poles over the kitchen stove, or attach strings to the corners and bring them together at the middle, and attach to a pulley over head; this we can raise or lower at our pleasure. We dry our apples in January. We consider the *Baldwin, Greening*, and others, if dried in January, much better for sauce than if dried in October, and there are no fly specks on them then, and a warm fire soon dries them. On these mats you can dry peaches, plums and pears, when too ripe to be dried on the string, and it saves considerable labor. Our mats have been in use over fifteen years, and are good yet.

Wesleyville, Erie Co., Pa. R, S.

CURE FOR THE HOG CHOLERA.—A corespondent residing in Ohio, writes that he has discovered a remedy for the malady among hogs which has proved so fatal in that and other States. His remedy is two quarts of flax seed boiled in ten gallons of water till the seed is thoroughly cooked; let it stand till cold, then give it to the hogs as fast as they can drink it—turn it down if they refuse to drink. Repeat the dose for a week or so, and it will effect a cure. Pulverized charcoal and sulphur mixed in milk, I know to have cured the hogs of this fatal disease last fall in this neighborhood. E. S.

Pittsford, N. Y.

LAYING OUT LANDS FOR WHEAT.—An esteemed Canadian correspondent says that "lands for wheat should run north and south, for if they run east and west the wheat will be the best on the south side of the land—especially if ridged up high—and thinner and of a poorer sample on the north side." Have others observed this effect?

GUANO IN ENGLAND.—Since the introduction of guano, in 1841, there has been imported into Great Britain 2,120,445 tons. The largest quantity in any one year was 305,061 tons, in 1855. Last year the imports were 200,000 tons. The price has recently been raised in England £2 per ton.

RACK FOR TOMATO VINES OR SMALL SHRUBBERY.—Take four staves and one hoop of an old barrel, turn the staves inside out, and nail them inside of the hoop with shingle nails. It makes a first rate frame. Sharpen the lower end of the staves, so that they can be driven into the ground a little. A. H.—*Lenox, Ohio.*

THE WHEAT MIDGE DESTROYED BY A RAIN STORM.—A correspondent of the *Maine Farmer* states that the wheat midge was nearly exterminated in Maine last year by a heavy rain storm, which occurred just at the time the insect was depositing its eggs in the newly-formed grain.

WHEAT IN MICHIGAN.—A correspondent in Delhi, Ingraham Co., Mich., informs us that the wheat looks exceedingly well in that section, and there is a good prospect of a large crop. The wheat midge has not, as yet, made its appearance in central Michigan.

JONATHAN HAWORTH sends us a dollar for the *Genesee Farmer*, but does not give his post-office address.

READ THE ADVERTISEMENTS.—Those who are about to purchase fruit or ornamental trees and shrubs this spring, should read over the advertisement of A. FROST & Co. of this city, W. R. PRINCE & Co. of Flushing, L. I., W. T. & E. SMITH, of Geneva, N. Y., and H. A. MISH, of Harrisburg, Pa. Orders may be sent to any of the above firms with confidence. Those in want of agricultural implements, threshing machines, horse powers, &c., will read the advertisement of WHEELER, MELICK & Co., of Albany, N. Y. This firm is one of the oldest and most respectable in the country, and their machines are all that they claim for them. Good seeds of all kinds can be obtained from J. M. THORBURN & Co., New York. This firm is too well known to need any commendation from us.

In this connection we would say that it is our object to make our advertising columns interesting to our readers, and as our space is very limited, we should be glad if our friends would make their advertisements as short as possible. We believe the circulation of the *Genesee Farmer* is larger than that of any other purely agricultural or horticultural paper in the world, and though our terms for advertising may be considered high, they are low in proportion to our circulation—far less than many of our contemporaries, and the pressure upon our advertising columns proves that this is well understood.

EWES AND LAMBS.—As lambing time is getting near, a few hints may not come amiss. In the first place, provide the ewes with a comfortable building, and when the ewes commence lambing be sure to give plenty of time before interfering; if straining very much, she must have some help, but first ascertain if the lamb is all right. As soon as the lamb is drawn, lay it before its mother so that she may lick it; then examine the ewe if she has milk in both teats. Next take the lamb and let it get its belly full of milk, and there will not be much fear but that it will stand more cold than any one might imagine. I had ewes come in to lamb last year in the middle of February, which never took any harm. This year they came in the same time, but being such beautiful weather it gave them a good chance. Give plenty of roots, and a few peas and oats mixed, and a little hay. Ewes should have a plentiful supply of water or their milk will soon fall off. Be sure and feed the ewes well;—the *better* fed the more profit in both wool and mutton. J. K.—*Guelph, C. W.*

PRIZE ESSAYS.—We have received a vast number of communications on nearly all the subjects included in our prize list. The Prize Essays will be published next month, and our readers may expect a rich treat.

BREAKING COLTS.—One of our readers is desirous of hearing from our experienced correspondents in regard to the best method of breaking colts.

CORRECTION.—In the article on page 95 of last number, read "sow a little *white* mustard," instead of *winter* mustard.

ERRORS IN MAILING.—If any of our subscribers fail to get their papers, we hope they will immediately make it known.

DURHAM CATTLE FOR CALIFORNIA.—Messrs. B. & C. S. HAINES, of Elizabeth, N. J., have just made a shipment of Short-horns to GEORGE H. HOWARD, of San Francisco, the first of this breed of cattle sent to that State. The lot embraces one bull, two years old, and one about six months old; and two heifers, a year and a half old. We shall look with much anxiety for the success of this first undertaking to introduce improved cattle into that great State, so well adapted to the business of stock raising.

A GOOD COW.—I began feeding a small-boned grade Durham cow, five years old, the fifteenth of October last, with half a bushel of oat and corn meal per day, and fed until the second of March, when she was butchered. Her live weight was 1,450 lbs.; dressed weight, 1,075 lbs., as follows: the four quarters weighed 838 lbs., tallow (rough) 165 lbs., kidneys 80 lbs., hide 72 lbs. This cow raised a calf last season, and gave milk until three weeks before being killed. S. N. FRANKLIN.

Ledyard, March, 1857.

A PRAIRIE FARMER'S OPINION OF THE GENESEE FARMER.—Before closing this communication, permit me to say that I have been a constant reader of the *Genesee Farmer* for seven years. Perhaps it would be extravagant to say that it is worth its weight in gold; but I *will say* that its value *cannot be estimated by dollars and cents*. I have received more information from *this journal*, than from *experience, observation*, and *all other sources combined*. W. H. BENTLEY.

Brimfield, Ill.

Inquiries and Answers.

(O. L. BAER, Milford, Ind.) ORCHARD GRASS.—You can obtain Orchard grass seed from E. D. HALLOCK, of this city, for three dollars per bushel. The botanical name is *Dactylis glomerata*. There are a great variety of opinions in regard to its value, and we should be glad to hear from our corrospondents on the subject. It is called Cocksfoot grass in England. SINCLAIR, who conducted the celebrated Woburn experiments on grasses, says that "if one species only is thought preferable to another in the alternate husbandry, that species is the *Dactylis glomerata*, from its more numerous merits." This is higher praise than the experience of farmers generally will sustain. LOUDON says of orchard grass: "It has been found highly useful as an early sheep feed. It is early, hardy, and productive, but is a coarser plant than rye grass, and requires even greater attention in regard to being cut soon or fed close." American as well as English writers agree that it must be eaten close, or mown when quite green, or it becomes coarse, hard, and unpalatable. A writer in the *Ohio Cultivator* tried it, and says: "It grew tolerably well, and certainly is the best grass I ever had to keep, *for nothing will eat it*." This is owing, probably, to neglect of close cropping. At all events, we have seen this grass on good farms in Ohio, yielding three tons of hay per acre, and those who raised it spoke of it in the highest terms. It is well adapted for sowing with red clover, as it matures about the same time.

It flourishes best on deep, rich, moist soils, (not wet,) and does not object to a little shade. It is on this account, probably, that it is termed "orchard grass." Many appear to suppose that it is less injurious to orchards than any other grass, but of this there is, to say the least, no proof.

(J. C. A.) "HARD WATER" contains sulphate and carbonate of lime; seldom any *free* acid. When potash or soda is added to water containing sulphate of lime (plaster,) the sulphuric acid leaves the lime and unites with the potash or soda, and the lime falls to the bottom, and the water is rendered "soft." If soap is used, the same change takes place, except that the lime unites with the oil of the soap and rises to the surface. Water which is "hard" from containing carbonate of lime, may be reduced soft by adding a little quick lime to it, and allowing it to settle before it is used.

(S. S. SARGENT, Girard, Penn.) Dwarf apple trees will bear in three years from the bud. You can purchase trees from the nursery this spring and obtain a little fruit next fall, though it is not advisable to let them bear so soon. The same variety is said to be larger and finer on dwarf than on standard trees. You can obtain almost any varieties you wish.

(B. F. B.) The cut of the "properly trained hedge" in the *Rural Annual*, is not "a fancy sketch." It is a correct representation of a beautiful osage orange hedge growing in front of the grounds of Messrs H. E. HOOKER & Co., of this city.

(CHARLES ROCKWELL, Hadley, N. Y.) ITALIAN BUCKWHEAT.—The "Italian buckwheat" proved to be nothing more nor less than Italian *millet*.

(J. W.) The fluke and buiscuit potato is the same. J. S. CLARKE, of Greece, Monroe Co., N. Y., has them for sale, we believe at $1.50 per bushel.

(J. W. A. K.) We cannot insert your advertisement at any price, believing your receipts to be a humbug.

(T. S. T.) See advertisements of the Chinese Sugar Cane Seed in this number of the *Farmer*.

(B. F. BARTLET.) VINES IN THE COLD GRAPERY, that were not disbudded in the fall, had better now be allowed to remain until they have started into growth and have made shoots four or six inches long, or leaves two or three inches in diameter. Then those buds that should have been cut out in the fall may be broken out now without danger of causing the vine to bleed, as the rapidly expanding foliage will take the super-abundant sap. But where there are two shoots starting from the same bud, as it were, or double bud, then the shoot to be taken away had better be *cut* away to half an inch of its base, as the breaking of the one is liable to break the other. JOSIAH SALTER.

SOWING LOCUST SEED.—In answer to J. L. MILLER'S inquiry. I would state from twenty years' experience what I concieve the best method. Put the locust seed in a shallow wooden vessel and pour on boiling water from a teakettle till covered, at the same time stir briskly with a wooden spatula until the water cools;—repeat the second and third time. Plant in the spring, and the seed will *all* vegetate as readily as corn. The like treatment destroys the osage orange. L. A. MEEKER.

FOOT CORN PLANTER.—I want some information about the "Foot Corn Planter." Is it what it is represented to be, and will it do the business as it ought to be done? Where can it be obtained, and at what price? By answering the above, you will confer a favor on your Canadian subscribers. L. LEWIS.—*Sparta, C. W.*

Will some of our readers—who are not interested—answer the above?

HEDGES.—I want to plant out some hedges to a considerable extent, and not thinking the Osage Orange to be hardy enough for our locality, would like the opinion of your correspondents in regard to the Buck or Hawthorn—where to obtain it, and how to plant the seed; also in regard to the Norway Spruce as a shelter for orchards, and if the thorn would not do well planted between them for a fence, thereby obtaining two objects. P. E. WILLIAMS. —*Palermo, C. W.*

ADVERTISEMENTS,

To secure insertion in the FARMER, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—TWO Dollars for every hundred words, each insertion, PAID IN ADVANCE.

NEW YORK STATE AGRICULTURAL SOCIETY.

PREMIUMS ON FARMS—1857.

Grain Farms,.....Premium $50 and $30
Dairy and Grazing,..... " 50 " 30

Competitors are desired to give notice to the Secretary before the first of July, so that the farms can be visited by a Committee appointed for that purpose.

FIELD CROPS.—Competitors should obtain the Regulations of the Society, so as to have their statements properly prepared. H. Greeley's Premium on one acre of Carrots is continued. Regulations will be furnished on application to the Secretary, and also a list of Premiums for 1857. B. P. JOHNSON,

AGRICULTURAL ROOMS, Albany, March 2, 1857. Secretary.
April 1.—3t.

C. M. SAXTON & CO.,
AGRICULTURAL BOOK PUBLISHERS,
140 Fulton Street, New York,

HAVE just added to the number of books published exclusively by them the following valuable works:

Waring's Elements of Agriculture,..... 75
Dadd's Anatomy and Physiology of the Horse, plain plates,..$2.00
do do do colored do,... 4.00
Dadd's Modern Horse Doctor,..... 1.00
Cole's American Veterinarian,..... 50
Cole's American Fruit Book,..... 50
Schenck's Gardener's Text Book,..... 50
Leuchars on Hot Houses,..... 1.25
Breck's Book of Flowers,..... 1.00
Bridgeman's Young Gardener's Assistant,..... 1.50
Bridgeman's Kitchen Gardener's Instructor,..... 50
Bridgeman's Fruit Cultivator's Manual,..... 50
Bridgeman's Florist's Guide,..... 50
Stansbury's Chinese Sugar Cane and Sugar Making,..... 25
Hyde's Chinese Sugar Cane,..... 25
The Cotton Planter's Manual,..... 1.00

☞ *Sent free of postage on receipt of price.* April 1.—1t.

BOOKS FOR THE SEASON.

FRUITS AND FLOWERS.

☞ *Sent free of postage on receipt of price.*

Chorlton's Complete Grape Grower's Guide:
For the Vineyard, Cold Grapery and Forcing House,.... 60
Allen on the Grape:
A well known and reliable work,.....$1.00
Reemelin's "Vine-dresser's Manual:"
For out-door Culture and Wine-making..... 50
Person's New Process for the Culture of the Vine. Paper,... 25
Elliott's American Fruit Grower's Guide:
The latest work on Fruits,..... 1.25
Cole's American Fruit Book,..... 50
Eastwood's Cranberry Culture,..... 50
Pardee on the Strawberry,..... 60
Buist's Kitchen Garden,..... 75
Buist's Flower Garden Directory,..... 1.25
Breck's Book of Flowers,..... 1.00
Bridgeman's Young Gardener's Assistant,..... 1.50

Catalogues of all our Books sent free to an address.

C. M. SAXTON & CO.,
Agricultural Book Publishers,
April 1.—1t. 140 Fulton street, New York.

"CHINESE SUGAR CANE AND SUGAR MAKING,"

NOW READY, AND SENT FREE OF POSTAGE FOR 25 CENTS, and for 8 cents additional, enough seed to plant two square rods. C. M. SAXTON & CO.,
Agricultural Book Publishers,
April 1.—1t. 140 Fulton street, New York.

New Northern Chinese Sugar Cane Seed.
(SORGHUM SACCHARATUM.)

JUST RECEIVED,
A LARGE QUANTITY,
PURE AND GENUINE,

From the original source, and for sale at $1 per pound, and in packets, prepaid by mail, at 25 and 50 cents each.

☞ Two pounds are required to seed an acre.

J. M. THORBURN & CO.,
15 John St., New York.

VEGETABLE, FLOWER, FIELD, FRUIT, AND TREE SEEDS,

Of the most approved sorts and best qualities, at Wholesale and Retail.
April 1.—1t.

FRUIT AND ORNAMENTAL TREES
INCLUDING

EVERGREENS, the finest collection in the Union; 1,000 lbs. *Chinese Sugar Cane*, and also parcels of 8,000 Seeds, postpaid, for $1.25; *Chinese Imperial Rice White Potato*, the most valuable of all esculents, and *the only ones for sale of American growth*, at $3 per dozen, $5 per twenty, $20 per hundred; Imported Tubers, uncertain varieties, $1 per dozen; Osier Willows, eight finest kinds, $2 to $5 per thousand; Lawton Blackberry, $18 per hundred, $3 per dozen; Grapes, Gooseberries, Raspberries, Currants and Strawberries, at lowest rates; Linnæus and Victoria Rhubarb, $5 per hundred; Arbor Vitæ, small, for hedges, and up to eight feet high; all the species of Evergreens, of small sizes, for Nurseries; all the new varieties of Native Grapes; Tree and Shrub Seeds; Vegetable, Flower, and Evergreen Tree Seeds; Earth Almonds; Yellow and Honey Locust, and Osage Orange Seeds.

Priced Catalogues of every department sent to applicants who enclose stamps. W. R. PRINCE & CO.
Flushing, N. Y., April, 1857.—1t.

TO NURSERYMEN AND OTHERS.

FOR SALE AT

GENESEE VALLEY NURSERIES,
ROCHESTER, N. Y.

WE offer to the trade the following Nursery articles at extremely low prices, affording rare inducements to Nurserymen and Dealers:

10,000 Fontenay Quince stools—the best stock for dwarfing Pears—three years old, strong plants. These plants yielded 50,000 well-rooted layers this past summer. This is the only sure method of propagating Quince stocks. Price, $25 per thousand.
20,000 Plum Stocks, extra fine. Price, $15 per thousand.
10,000 Pear Stocks, two years. Price, $15 per thousand.
25,000 Western, or Wild Plum Stocks. Price $12.50 per thousand.
25,000 Quince Stocks—Angers and Fontenay—first choice. Price, $20 per thousand.
25,000 Peach Trees, one year old, very fine and choice budded varieties. These trees are perfectly free from Yellows and other diseases. Price, $70 per thousand.
5,000 Apricots, one year old, extra. Price, $10 per hundred.
10,000 Cherries, second size, two years old, three to five feet high, part with heads, best varieties. Price, $5 per hundred.
10,000 Pears, dwarf, second size, one and two years old, 2½ to 3 feet, best sorts. Price, $14 per hundred.
8,000 Pears, standards, second size, two years old, 3 to 4 feet, very best varieties. Price, $160 per thousand.
10,000 Horse Chestnuts, one year. Price, $10 per thousand.
25,000 Arborvitæ, 2½ to 3 feet, for hedges, very fine plants, and very cheap. Price, $60 per thousand.
50,000 Norway Spruce, two years old, suitable for transplanting, four to six inches. Price, $18 per thousand.
500 Deutzia gracilis. Price, $12 per hundred.
1,000 Wigelia rosea. Price, $18 per hundred.
1,000 Bignonia radicans. Price, $8 per hundred.
3,000 Dahlias, splendid collection, dry roots for propagating.—Price, $10 to $25 per hundred.
2,000 English Yews, 5 inches. Price, $8 per hundred.
1,000 Siberian Arborvitæ, 6 inches. Price, $8 per hundred.
500 Cryptomeria Japonica, 12 to 18 inches. Price, $25 per hundred.
500 Euonymus Japonica, variegated, 12 to 18 inches. Price, $3 per hundred.

For more full and complete information, the proprietors refer to the following Catalogues now ready, gratis, to those who enclose a one cent stamp for each:

No. 1. Descriptive Catalogue, Fruits.
No. 2. Descriptive Catalogue, Ornamental Trees, Shrubs, Roses, &c.
No. 3. Descriptive Catalogue, Dahlias, Verbenas, Green-house Plants, &c.
No. 4. Wholesale Catalogue or Trade List.

A. FROST & CO.,
March 1.—2t. Genesee Valley Nurseries, Rochester, N. Y.

NEW YORK STATE AGRICULTURAL WORKS,

BY WHEELER, MELICK & CO.

DOUBLE POWER, AND COMBINED THRESHER AND WINNOWER, IN OPERATION.

WE are Manufacturers of Endless Chain Railway Horse Powers, and Farmers' and Planters' Machinery for Horse Power use, and are owners of the Patents on, and principal makers of, the following valuable Machines:

WHEELER'S PATENT SINGLE HORSE POWER,
AND
OVERSHOT THRESHER with VIBRATING SEPARATOR.

This is a One Horse Machine, adapted to the wants of medium and small grain growers. It separates grain and chaff from the straw, and threshes about 100 bushels of wheat or twice as many oats per day, without changing horses; by a change nearly double the quantity may be threshed. **Price, $128.**

WHEELER'S PATENT DOUBLE HORSE POWER,
AND
OVERSHOT THRESHER with VIBRATING SEPARATOR.

This Machine is like the preceding, but larger, and for two horses. It does double the work of the Single Machines, and is adapted to the wants of large and medium grain growers, and persons who make a business of threshing. **Price, $160.**

WHEELER'S PATENT DOUBLE HORSE POWER,
AND
COMBINED THRESHER AND WINNOWER.
(SHOWN IN THE CUT.)

This is also a Two Horse Machine. It threshes, separates the grain from the straw, and winnows it at one operation, at the average rate of 150 bushels of wheat and 300 bushels of oats per day. In out door work, and for persons who make a business of threshing, it is an unequaled Machine. **Price, $245.**

ALSO,

Clover Hullers, Feed Cutters and Sawing Machines.

Our Horse Powers are adapted in all respects to driving every kind of Agricultural and other Machines that admit of being driven by Horse Power, and our Threshers may be driven by any of the ordinary kinds of Horse Powers in use. Either are sold separately.

☞ To persons wishing more information, and applying by mail, we will forward a circular containing such details as purchasers mostly want—and can refer to gentlemen having our Machines in every State and Territory.

Our firm have been engaged in manufacturing this class of Agricultural Machinery 22 years, and have had longer, larger and more extended and successful experience than any other House.

All our Machines are warranted to give entire satisfaction, or may be returned at the expiration of a reasonable time for trial.

☞ Orders from any part of the United States and Territories, or Canada, accompanied with satisfactory references, will be filled with promptness and fidelity. And Machines securely packed, will be forwarded according to instructions, or by cheapest and best routes. WHEELER, MELICK & CO.,

April 1.—1t. Albany, N. Y.

TO FARMERS AND GARDENERS,

THE Subscribers offer for sale 40,000 barrels of their New and Improved POUDRETTE, manufactured from the night-soil of New-York city, in lots to suit purchasers. This article (greatly improved within the last two years) has been in the market for eighteen years, and still defies competition as a manure for Corn and Garden Vegetables, being *Cheaper, more powerful than any other*, and at the same time *free from disagreeable odor*. Two barrels ($3 worth) will manure an acre of corn in the hill, will save two-thirds in labor, will cause it to come up quicker, to grow faster, ripen earlier, and will bring a larger crop on poor ground than any other fertilizer, and is also a preventive of the cut worm; also, it does not injure the seed to be put in contact with it.

The L. M. Co. point to their long-standing reputation, and the large capital ($100,000) invested in their business, as a guarantee that the article they make shall always be of such quality as to command a ready sale.

Price, delivered in the city free of charge and other expense—

One barrel,	$2.00
Two "	3.50
Five "	8.00
Six "	9.50

And at the rate of $1.50 per bbl. for any quantity over 6 bbls.

☞ A Pamphlet, containing every information, will be sent (FREE) to any one applying for the same. Our address is—

THE LODI MANUFACTURING CO.,
feb 1—4t Office, 60 Cortlandt St., New York.

FRUIT, ORNAMENTAL TREES AND SEEDLINGS.

W. T. & E. SMITH,

Proprietors of the Geneva Nursery, Geneva, N. Y.,

CALL the attention of Nurserymen, Planters and Dealers to their general assortment of Trees and Plants, consisting of a large stock of Standard and Dwarf Cherry, Dwarf Apple, Dwarf Pear, Apricot, Peach, Raspberry, Strawberry and Currant Plants, Roses (large variety), Evergreens, &c. Standard Apple, one and two years, cheap, to clear the ground. Also, a large stock of Seedlings and Stocks of Mahaleb Cherry, Mazzard Cherry, French Quince, Plum, Pear, Horse Chestnut, Arborvitæ. Basket Willow Cuttings, $1.50 per thousand. Quince Cuttings. Scions, of all kinds, furnished to order; terms low. March 1.—2t*

CHINESE SUGAR CANE SEED.

NEW, pure, and well ripened, by mail, in packets at 50 cents and $1 each. All the best Vegetable and Flower seeds, by mail, sixteen packets for $1. Also, all the finest Roses, Bulbs, &c.

Address W. T. GOLDSMITH,
March 1.—2t. Rochester, N. Y.

PLEASE TO READ THIS.

EMPLOYMENT FOR THE WINTER. Persons out of employment may find that which is both profitable and pleasant by addressing ROBERT SEARS, Publisher,
Jan. 1—4t. No. 181 Williams street, New York.

CHOICE FLOWER & VEGETABLE SEEDS,
AT GREATLY REDUCED RATES.

MR. JAMES VICK, the former publisher of the *Genesee Farmer*, imported from France some very choice Flower and Vegetable Seeds, which passed into the hands of the subscriber in his purchase of the establishment. The seeds are all good, and of the very best and rarest kinds, and will be sold at a reduced price.

Any of the following kinds of FLOWER SEEDS will be sent, postage paid, to any address in the United States, *for four cents per package:*

DOUBLE BALSAM—Large flowers, splendid colors.
CENTAUREA—Unique and beautiful.
CALANDRINIA—Delicate and pretty.
RED AMARANTH—Fine for drying—everlasting.
WHITE " "
ORANGE " "
CHINA ASTER—Large, double, and fine colors.
STOCKS—Very sweet scented.
CHINA PINK—Beautiful colors.
PETUNIA—Fine for masses.
MIMULUS—Rare and showy.
CANDY TUFT—Very showy and sweet.
PHLOX DRUMMONDII—Elegant and profuse flowerer.
COREOPSIS—Very graceful and effective.
NEMOPHILA—Modest and beautiful.
PORTULACCA—Very gay, and very hardy.
SWEET PEA—Elegant and sweet.
MIRABILIS—Large and very handsome.

The following rare and valuable VEGETABLE SEEDS will be sent for *six cents* per package:

EARLY BROCOLI—Unrivaled for early use.
WHITE SOLID CELERY—The best ever introduced.
EARLY SHORT-HORN CARROT—Best for cooking.
EARLY PARIS CAULIFLOWER—The only good one for this climate.
LARGE LENORMAND CAULIFLOWER—Very large and fine.
LARGE LATE DUTCH CABBAGE—Better than Drumhead.
EARLY YORK " —The best early.
DARK RED DUTCH " —The best red.
WINNINGSTADT " —Splendid Summer Cabbage.
EARLY SAVOY " —Rare and fine.
LARGE PURPLE EGG PLANT—Unequaled for table.
WHITE LISBON ONION—The best white.
ROUND MADEIRA—Takes two years to mature.
BLOOD RED PORTUGAL ONION—The best red.
CELERIAC, OR TURNIP ROOTED CELERY—Unique and fine.

☞ All orders promptly attended to. Money may be sent at my risk. Address JOSEPH HARRIS, Rochester, N. Y.,
Publisher of the Genesee Farmer.

"EVERY FARMER SHOULD OWN THEM."

ALLEN ON THE DISEASES OF DOMESTIC ANIMALS.

THIRTY-FIRST THOUSAND.

Price 75 cents, and sent free of postage on receipt of price.

"Its greatest worth is as a 'complete Farrier.'"—*Farmer and Mechanic.*

"It ought to be in every family where Dairying is carried on."—*Worcester Transcript.*

"Worthy of a place in every Farmer's Library."—*Jeffersonian.*

"Just what is needed by every good Farmer."—*L. I. Farmer.*

"A very excellent book on Domestic Animals."—*Maine Farmer.*

"A most admirable practical work for every day use."—*Index.*

"The work ought to be in the hands of every Planter."—*N. O. Delta.*

"When such men as R. L. Allen take up the pen, something flows from it which does his fellow-men good."—*Iowa Advocate.*

"Here is a Book for the Million, written by a gentleman of science and experience."—*Newburyport Watchman.*

ALLEN'S (R. L.) AMERICAN FARM BOOK.

The American Farm Book; or, a Compend of American Agriculture, being a Practical Treatise on Soils, Manures, Draining, Irrigation, Grasses, Grain, Roots, Fruits, Cotton, Tobacco, Sugar Cane, Rice, and every Staple Product of the United States; with the best methods of planting, cultivating, and preparation for market.—Illustrated by more than one hundred engravings. By R. L. Allen.

One of the most complete Books upon American Agriculture that has yet been published. Price *One Dollar*. Sent free of postage. Address C. M. SAXTON & CO.,
April 1.—1t. 140 Fulton street, New York.

NEW STRAWBERRIES.

PRINCE'S PRIMATE, 75 cents per dozen, $2 for fifty, $3 per hundred; Prince's Imperial Scarlet, $1.50 per dozen, $4 for fifty, $6 per hundred; Prince's Scarlet Magnate, $1.75 per dozen, $4 for fifty, $8 per hundred.

☞ All the new and valuable Foreign kinds, including *Sir Harry, Admiral Dundas*, &c., imported directly from Europe—also the new Native kinds, *Peabody's Seedling*, &c.—at greatly reduced prices, in the fall of 1857. H. A. MISH.
Keystone Nursery, Harrisburg, Pa., April 1.

Contents of this Number.

Cultivation of Barley, ... 106
Cultivation of Oats, ... 107
Cultivation of Spring Wheat, ... 107
Cultivation of Carrots, ... 107
An Interesting Letter from Professor Lee, ... 108
Items Suggested by the March Number, ... 109
Notes for the Month, by S. W., ... 109
Ten Rules to be observed in Making Butter, ... 110
Cultivation of Carrots, ... 111
Plowing, ... 111
Sow Lettuce with Cabbage, ... 111
The Best Method of Fencing a Farm, ... 112
Cultivation of the Mangel Wurzel, ... 113
The Management of Sheep, ... 113
When does Wool grow? ... 114
Experiments on Indian Corn, ... 114
On the Management of Swine, ... 114
Cultivation of Potatoes, ... 114
Large vs. Small Beans, ... 115
Objects of Plowing, ... 115
Farm Houses in Michigan, ... 115
Average Injury from the Wheat Midge, ... 116
Sowing Parsneps in the Fall, ... 116
Buying Western Lands, ... 116
Cultivation of Artichokes, ... 117
Cultivation of Indian Corn, ... 117
Devon and Durham Cattle, ... 117
Beans as a Field Crop, ... 117
To Kill Bugs in Seed Peas, ... 117
Cultivation of Indian Corn in Kentucky, ... 118
Fall Plowing for Spring Wheat, ... 118
Raising Clover Seed in Massachusetts, ... 118
Eating off Wheat in the Spring, ... 118
Hoven in Cattle, ... 118
Summer Management of Sheep, ... 119
Cultivation of Indian Corn in Maine, ... 119
Stables for Horses, ... 119
Poll Evil, ... 119
Best Means of Destroying Weeds, ... 119
Agricultural Papers, ... 119
Flying Morgan, ... 120
Sheep should not be Kept too Long in a Small Field, ... 120
To Prevent Smut in Wheat, ... 120
Sowing and Reaping, (Poetry,) ... 120
Design for a Farm House, ... 121

HORTICULTURAL DEPARTMENT.

Cultivation of Dwarf Pears, ... 122
Garden Seeds should be Sown in Drills, ... 123
Transplanting Garden Vegetables, ... 123
Horticultural Operations for April, ... 124
Flowers for Spring Sowing, ... 125
Birds—their Usefulness, &c., ... 125
Fruit Growing in Oregon, ... 127
Making an Osage Orange Hedge, ... 127
"My New Garden," ... 128

LADIES' DEPARTMENT.

Original Domestic Receipts, ... 129

EDITOR'S TABLE.

Muriatic Acid in Manure Heaps; Phosphate of Lime in Guano; Great Cheese Factory; Bees; Price of Labor in England and America; Liquid Manures; The April Premiums, ... 130
Feeding Cows; Short-horn Bull "Master Butterfly;" "Feeding Cows for Butter—New Views;" Young Farmers should take the Genesee Farmer; To Destroy Weeds; Lime as a Manure; Cultivation of Potatoes in Washington Territory; Fall Plowing to Kill Canada Thistles; To Secure Male or Female Progeny at Will; Pink-fleshed Apple; Chester White Pigs; Lice on Calves, ... 131
Drying Fruit; Cure for the Hog Cholera; Laying out Lands for Wheat; Guano in England; Rack for Tomato Vines or Small Shrubbery; The Wheat Midge Destroyed by a Rain Storm; Wheat in Michigan; Read the Advertisements; Ewes and Lambs; Prize Essays; Breaking Colts; Correction; Errors in Mailing, ... 132
Durham Cattle for California; A Good Cow; A Prairie Farmer's Opinion of the Genesee Farmer; Inquiries and Answers, ... 133

ILLUSTRATIONS.

Seven Figures, representing different varieties of Barley, ... 106, 108
Flying Morgan, ... 120
Farm House, with Diagrams for First and Second Floors, ... 121
Drill-Rake, ... 123
Transplanting Fork, ... 123
Transplanter, ... 123